#### NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Bureau of Technical Support 625 Broadway, 11th Floor, Albany, NY 12233-7020 P: (518) 402-9543 I F: (518) 402-9547 www.dec.ny.gov

April 30, 2015

Mr. Walter E. Mugdan, Director Emergency and Remedial Response Division USEPA, Region II 290 Broadway Edison, NJ 10007–1866

Re: Request for Removal Action Evaluation
Town of Niagara Highway Garage,
7105 Lockport Road
Niagara (T), Niagara Co.
DEC Site #932163

Dear Mr. Mugdan:

We request that the United States Environmental Protection Agency (USEPA) evaluate the property at 7105 Lockport Road in the town of Niagara, Niagara County ("site") for a removal action. As discussed below, the presence various pesticide-related compounds (e.g., lindane-related compounds, beta-hexachlorocyclohexane (BHC)) on the ground surface and subsurface soils on the site presents risks to the environment and human health in the area of the site.

The Niagara Highway Garage Site is located in a rural area at 7105 Lockport Road in the town of Niagara, Niagara County. The site is approximately 0.70 miles east of the intersection of Military Road and Lockport. The main site features consists of a material storage area for stone, pipe, and other construction materials that are being used by the Town of Niagara's Highway Department. The site is located at the rear of the property, behind the Highway Garage Building and it is bounded to the south by an active rail line. Drainage is provided by surface water ditches in the vicinity of the yard.

The site is currently active, and is zoned for municipal use. The surrounding parcels are currently used for a combination of commercial, residential, and agricultural uses. The nearest residential area is located adjacent to the Town Hall building approximately 450 feet west of the site. There is also additional housing located directly south of the site on the other side of the rail line tracks. The waste is currently exposed on the surface of the yard.

During recent construction activities on the site, an odor in the rear (south) of the Town Garage property was noted. In response, the Town Engineer (Clark Patterson Lee) installed five test pits that were dug along the south side of their facility. Four of the five test pits encountered between 8 and 12 inches of road sub-base stone overlying one to two feet of fill materials. The fill contained slag, bricks, and other construction-related debris, intermixed with a white filter-cake like material with a significant chemical odor observed. Samples were collected of the fill material and it was analyzed for TAL Metals, TCL Volatiles and TCL Semi-Volatiles, including tentatively identified compounds (TICs). The analyses detected elevated several TICs in the BHC family (primarily Lindane). There is no knowledge or documentation of pesticides or other waste materials disposed of in this area by either the Town or others.

DEC is currently conducting a site characterization of the site which is expected to be completed in May 2015. Preliminary information indicates that the waste on the site appears to be very well defined, covering an area approximately 100' x 200' x 5' in depth. Concentrations of BHCs in both surface and subsurface soils is very elevated and suggested the disposal of a concentrated waste product at the site. The enclosed information provides background on the degree and extent of contamination.

To prevent contact with the exposed wastes, DEC plans to do an interim remedial measure (IRM) and cover the affected area with filter fabric and stone as soon as the weather conditions permits. Preliminary discussions with the Town of Niagara has indicated that they do not have the funds available to complete the required long-term investigation and cleanup of the property.

In light of the potential threats to human health and the environment, we request that USEPA evaluate the site for a removal action. A site location map and additional support information are enclosed that depict the current conditions of the site.

If you have any questions or need additional information, please contact Mr. Dennis Farrar at (518) 402-9543.

Sincerely,

Andrew J. English, P.E.

Director

**Bureau of Technical Support** 

Andrew 2. Emghan

#### Enclosures

ec w/ enc: J. Rotola - USEPA, Region II, Edison, NJ

E. Mosher - USEPA, Region II, Edison, NJ

G. Zachos - USEPA, Region II, Edison, NJ

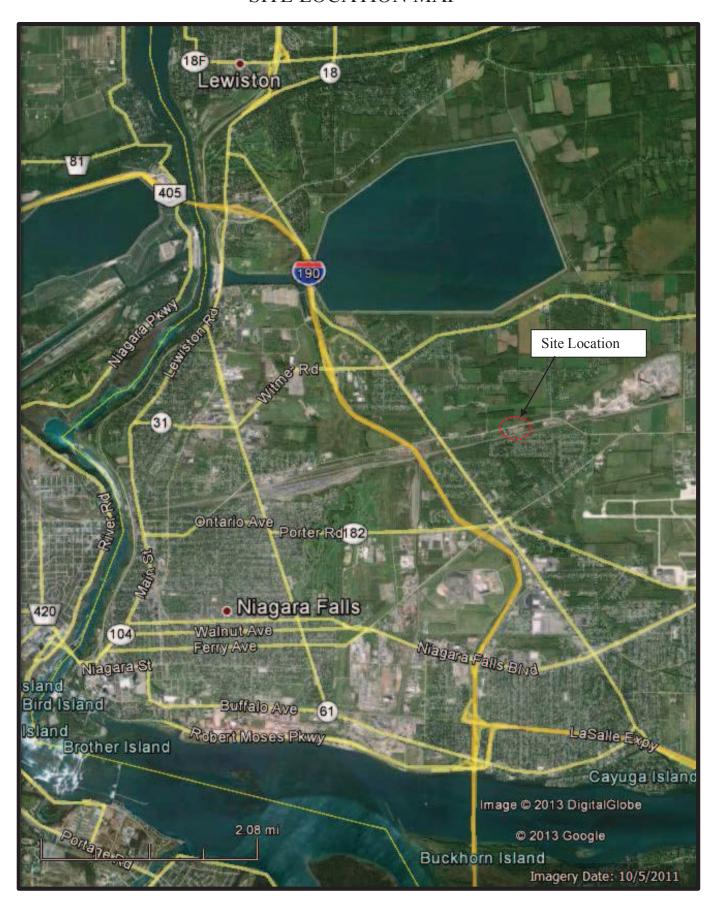
J. Daloia- USEPA, Region II, Edison, NJ

D. Graham USEPA, Region II, Edison, NJ

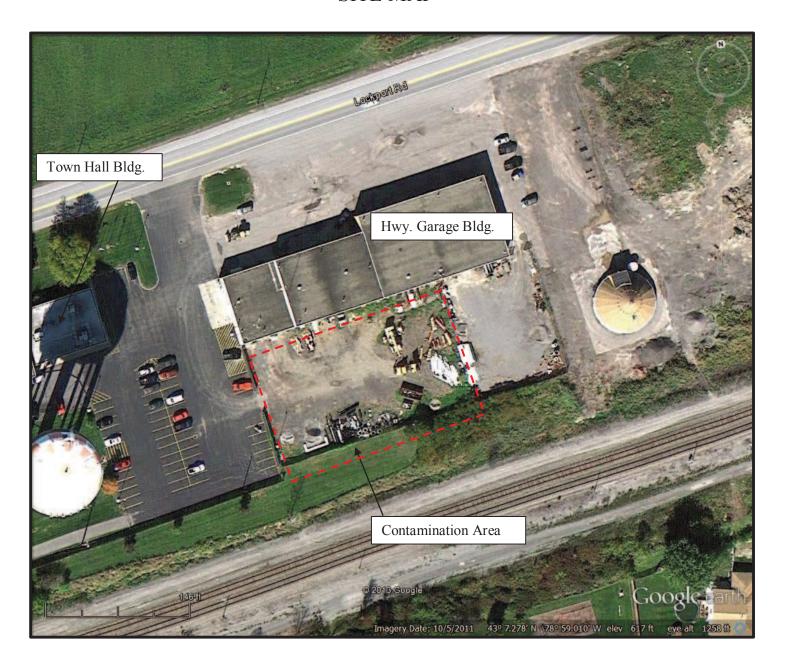
M. Forcucci, NYSDOH – Buffalo R. Schick, NYSDEC, Albany, NY

- G. Sutton, NYSDEC, Regional Spill Engineer, Region 9 M. Hinton, NYSDEC, Project Manager, Region 9 J. Strickland, NYSDEC, Regional Engineer, Region 9 D. Farrar, NYSDEC, Albany, NY

## FIGURE 1 SITE LOCATION MAP



## FIGURE 2 SITE MAP



## SITE PHOTOS







# NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION DIVISION OF ENVIRONMENTAL REMEDIATION Site Briefing Report



Site Code	932163	Site Name	Niagara Highway Garage	
Classification	P	Address	7105 Lockport Road	
Region	9	City	Niagara Falls	<b>Zip</b> 14305
Latitude	43.1210	Town	Niagara	
Longitude	-78.9836	County	Niagara Project Mar	nager Michael Hinton
Disposal Area	Dump			Estimated Size 0.5000

#### **Site Description**

Location: The Niagara Highway Garage Site is located in an rural area at 7105 Lockport Road in the town of Niagara, Niagara County. The site is approximately 0.70 miles east of the intersection of Military Road and Lockport.

Site Features: The main site features consists of a material storage area for stone, pipe and other construction materials that are used by the Town of Niagara's Highway Department. The site sits at the rear of the property, behind the Highway Garage Building and it is bounded to the south by an active rail line. Drainage is provided by surface water ditches in the vicinity of the yard.

Current Zoning and Land Use: The site is currently active, and is zoned for municipal use. The surrounding parcels are currently used for a combination of commercial, residential, and agricultural uses. The nearest residential area is located adjacent to the Town Hall building approximately 450 feet west of the site. There is also additional housing located directly south of the site on the other side of the rail line tracks.

Past Use of the Site: During recent construction activities on the site, an odor in the rear (south) of the Town Garage property was noted. In response the Town Engineer (Clark Patterson Lee) installed five test pits that were dug along the south side of their facility. Four of the five test pits encountered between 8 and 12 inches of road sub-base stone overlying one to two feet of fill materials. The fill contained slag, bricks and other construction-related debris, intermixed with a white filter-cake like material with a significant chemical odor observed.

Samples were collected of the fill material and it was analyzed for TAL Metals, TCL Volatiles and TCL Semi-Volatiles, including tentatively identified compounds. The analysis also detected elevated several tentatively identified compounds (TICS) in the BHC family.

There is no knowledge or documentation of pesticides or other waste materials disposed of in this area by either the Town or others. A determination of the extent of the waste, including further analysis of the material, is currently on-going.

In July 2014 the Department initiated a Site Characterization Study to determine the nature and extent of the contamination on site. The results of that study are due in early 2015.

Site Geology and Hydrogeology: While the specific information is limited at this time, general Niagara County geology and the test pit information would suggest that this area is underlain by a dense layer of alluvial clay inhibiting groundwater flow and contaminant transport. Limestone bedrock is located at

Contaminants of Concern (Including Materials Disposed)	<b>Quantity Disposed</b>
1,2-DICHLOROBENZENE	UNKNOWN
1,4-DICHLOROBENZENE	UNKNOWN
ALPHA-BHC	UNKNOWN
BENZENE	UNKNOWN
BETA-BHC	UNKNOWN
DELTA-BHC	UNKNOWN
LINDANE	UNKNOWN

**Analytical Data Available for :** Groundwater, Soil **Applicable Standards Exceeded for:** Groundwater, Soil

#### **Site Environmental Assessment**

#### **Site Health Assessment**

As information for this site becomes available, it will be reviewed by the NYSDOH to determine if site contamination presents public health exposure concerns.

## **Remedy Description and Cost**

### Remedy Description for Operable Unit 01

**Total Cost** 

**Capital Cost** 

**OM&M** Cost

**Issues / Recommendations** 

**Owners Operators** 

#### **Current Owner(s)**

Sylvia Virtuoso

Town of Niagara

7105 Lockport Rd

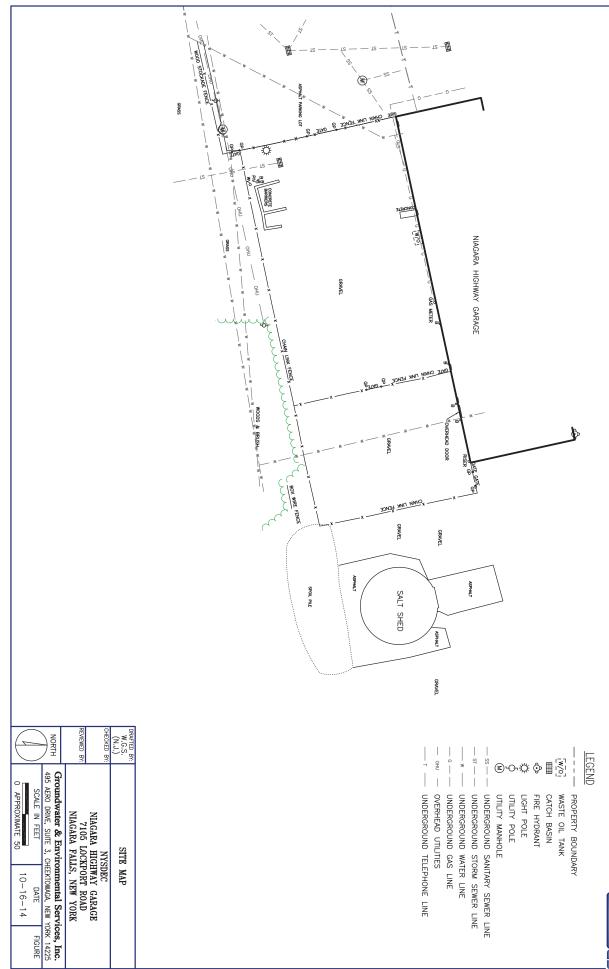
Niagara Falls NY 14305

Lee Wallace

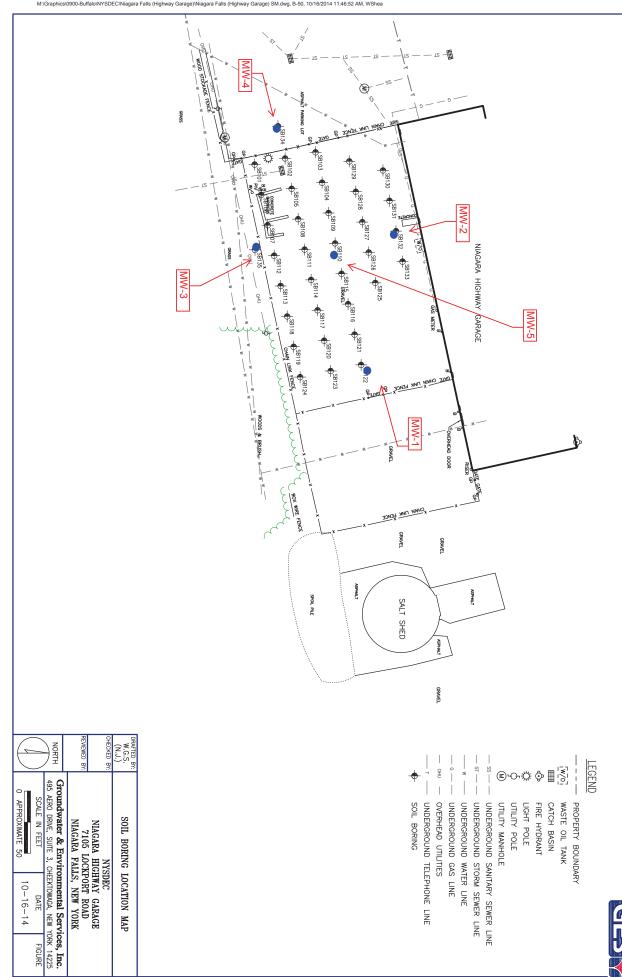
Town of Niagara

7105 Lockport Rd

Niagara Falls NY 14305







**GES** 

NC 12.6 5.5 0.0 0.0 0.0 9.9 9.9 NC 0.2 0.5 0.2 0.1 0.1 0.0 0.2 0.1 0.0 0.0 0.2 0.1 0.3 Photoionization Detector (ppmV) CAS# Metals via 6010C (mg/kg) 
 NA
 NA< No. 125 2400 2.500 11.000 3.700 3.000 3.000 3.510 4.500 4.500 No. 125 2.500 11.000 3.700 4.500 4.500 11.0000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.00 163 147 604 501 420 1,000 261 5.4 12.0 0.024 0.061 0.13 7,4 13,7 U 590 520 3,400 U U 60-57-1 Dieldrin 72-20-8 Endrin
103-4 Endrin Aldehyde 2,200 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2. 2789-03-6 gamma-Chlordane 76-44-8 Heptachlor 1024-57-3 Heptachlor epoxide 72-43-5 Methoxychlor 8001-35-2 Toxaphene CAS# Herbicides via 8151A (ug/kg) CAS# Volatile Organic Compounds via 8260C (ug/kg) 71-55-6 1,1,1-TRICHLOROETHANE 79-34-5 1,1,2,2-TETRACHLOROETHANE 76-13-1 1,1,2-TRICHLOROETHANE 79-00-5 1,1,2-TRICHLOROETHANE 120-82-1 1,2,4-TRICHLOROBENZEN 107-06-2 1,2-DICHLOROETHANE 78-87-5 1,2-DICHLOROPROPANI 991-78-6 2-HEXANONE 67-64-1 ACETONE 71-43-2 BENZENE 75-27-4 BROMODICHLOROMETHANE 75-25-2 BROMOFORM 56-23-5 CARBON TETRACHLORIDE DICHLORODIF 30,000 NS 160 000 2-5 STYRENE 8-4 TETRACHLOROETHYLENE(PCE) 100,000 CAS# Semi-Volatile Organic Compounds via 8270D (ug/kg) 95-95-4 2,4,5-TRICHLOROPHENOL 88-06-2 2,4,6-TRICHLOROPHENOL 120-83-2 2,4-DICHLOROPHENOL 105-67-9 2,4-DIMETHYLPHENOL 51-28-5 2,4-DINITROPHENOL

**GES** 

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	**6 NYCRR Part																												4		
Sample Point	375-6.8(b)	SB-102	SB-106	SB-106	SB-106	SB-108	SB-110	SB-112	SB-114	SB-114	SB-116	SB-116	SB-120	SB-124	SB-127 SOIL	DUP-1 (SB-127)		White Material	GMW-5	GMW-5	GMW-5	GMW-5	GMW-5	GMW-5	GMW-5	GMW-5	GMW-5	GMW-5	GMW-5	GMW-5	GMW-5 SOIL
Sample Type Depth (ftbr)	Restricted Use, Soil Cleanup	SOIL 0.5-2'	SOIL 0.0 5'	SOIL 0.5.21	SOIL 2-4'	SOIL 1-2*	SOIL L2'	SOIL 0.5-1'	SOIL 0.1'	SOIL 1-2'	SOIL 0.2'	SOIL 2-4'	SOIL 0.21	SOIL 0.5.4'	SOIL 1,2'	SOIL	SOIL	WASTE	SOIL 3.5.4'	SOIL 4-4-5'	SOIL 45-5'	SOIL 5-5-5	SOIL 5.5.6"	SOIL 6-6-5'	SOIL 6.5.7'	SOIL 7,7.5'	SOIL 7.5.8'	SOIL 8.8 5'	SOIL 85.9°	SOIL 9.9 5'	9 5.10 2'
Depth (Rbg) Sample Date	Objectives.		9/22/2014			9/22/2014	9/22/2014	9/22/2014	9/22/2014	9/22/2014	9/23/2014		9/23/2014	9/23/2014	9/23/2014	9/23/2014	9/23/2014	9/23/2014	11/4/2014	11/4/2014	11/4/2014		11/4/2014		11/4/2014		7.5-8'		11/4/2014	9-9.5	9.5-10.2
Sample Date	Residential	3/22/2014	9/22/2014	9/22/2014	9/22/2014	7/22/2014	9/22/2014	9/22/2014	9/22/2014	9/22/2014	9/23/2014	9/23/2014	9/23/2014	9/23/2014	9/23/2014	9/23/2014	9/23/2014	9/23/2014	11/4/2014	11/4/2014	11/4/2014	11/4/2014	11/4/2014	11/4/2014	11/4/2014	11/4/2014	11/4/2014	11/4/2014	11/4/2014	11/4/2014	11/5/2014
Photoionization Detector (ppmV)	Protection	0.0	NC	0.0	0.0	0.0	0.0	0.0	NC	12.6	5.5	0.0	0.0	0.0	9.9	9.9	NC	NC	0.2	0.5	0.2	0.1	0.1	0.0	0.2	0.1	0.0	0.0	0.2	0.1	0.3
59-S0-7 4-CHLORO-3-METHYLPHENOL	NS	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
106-47-8 4-CHLOROANILINE	NS	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
7005-72-3 4-CHLOROPHENYL PHENYL ETHER	NS	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
106-44-5 4-METHYLPHENOL (P-CRESOL)	NS	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
100-01-6 4-NITROANILINE	NS	U	U	U	U	U	U	Ü	U	Ü	Ü	U	U	U	U	U	U	U	NA	NA	NA	NA.	NA	NA	NA	NA	NA	NA	NA	NA	NA
100-02-7 4-NITROPHENOL	NS	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
83-32-9 ACENAPHTHENE	100,000	U	U	U	U	U	Ü	U	U	U	U	U	U	72	U	U	U	U	NA	NA	NA	NA	NA	NA	NA.	NA	NA	NA	NA	NA	NA
208-96-8 ACENAPHTHYLENE	100,000	U	U	U	U	U	Ü	U	U	U	U	U	U	U	U	U	U	U	NA	NA	NA	NA	NA	NA	NA.	NA	NA	NA	NA	NA	NA
98-86-2 ACETOPHENONE	NS	U	U	U	U	U	U	U	U	Ü	U	U	U	U	U	U	U	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
120-12-7 ANTHRACENE	100,000	450	U	U	U	U	U	Ü	48	U	U	57	63	280	500	270	U	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1912-24-9 ATRAZINE 100-52-7 BENZAL DEHYDE	NS NS	U	Ü	U	U	U	U	U	U	U	U	150	U	U	U	U	U	U	NA	NA	NA NA	NA	NA	NA	NA NA	NA	NA	NA NA	NA	NA	NA
100-52-7 BENZALDEHYDE 56,55-3 BENZO(A)ANTHRACENE		U	U	U	U	U	U	U 440	U		U	U 77	220	U		SSO	U	U	NA	NA		NA.	NA NA	NA		NA	NA.		NA	NA	NA NA
56-35-3 BENZO(A)AN IHRACENE 50-32-8 BENZO(A)PYRENE	1,000	1,600	U	U II	U II	U	U	960	230 230	1,700 U	210 170	69	230 280	880 820	900	490	U	U	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
50-52-8 BENZO(A)PYRENE 205-99-2 BENZO(R)FI LIORANTHENE	1,000	2 100	U	U	U	1 700	2 500	1 800	330	3 200	410	69	280 350	940	1.500	490 800	U	U	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
205-99-2 BENZO(B)FLOOKAN THENE 191-24-2 BENZO(G.H.DPERYLENE	100,000	1,300	II.	i i	U II	1,200	2,500	1,800	200	3,209 U	410 310	U	310	580	920	800 570	U	U II	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
207-08-9 BENZO(K)FLUORANTHENE	1,000	920	U	- 0		- 0	- 0	1,500	150	- 0	160	64	190	660	920 780	290	- 0	- 0	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
85-68-7 BENZYL BUTYL PHTHALATE	NS.	920	II.	ii ii	- 11	11	ii ii	390	130	U U	100	04 II	120	00U	780	290	U	II II	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA.	NA.
92-52-4 BIPHENYL (DIPHENYL)	NS	- 1	U	U	U	U	U	U	U	U	U	U	II	U	II.	II.	U	U	NA.	NA NA	NA	NA.	NA NA	NA	NA	NA	NA.	NA.	NA	NA.	NA.
111-91-1 BIS(2-CHLOROETHOXY) METHANE	NS	- ii	Ü	Ü	Ü	II.	Ü	Ü	Ü	Ü	- U	Ü	Ü	U	Ü	II.	U U	U	NA.	NA	NA.	NA.	NA NA	NA.	NA.	NA.	NA.	NA.	NA	NA.	NA.
111-44-4 BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETH	NS	ŭ	II.	Ti .	II.	Ü	Ü	II.	ii ii	Ü	- ii	ii ii	II.	II.	II.	Ü	II.	II.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
108-60-1 BIS(2-CHLOROISOPROPYL) ETHER	NS	Ü	U	Ü	Ü	Ü	Ü	Ü	Ü	Ü	Ü	U	Ü	Ü	Ü	Ü	U	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
117-81-7 BIS(2-ETHYLHEXYL) PHTHALATE	NS	U	U	U	69	U	U	U	U	U	U	U	280	U	U	U	160	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
105-60-2 CAPROLACTAM	NS	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
86-74-8 CARBAZOLE	NS	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
218-01-9 CHRYSENE	1,000	1,500	U	U	U	U	U	410	310	1,400	160	70	290	980	820	400	5.1	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
53-70-3 DIBENZ(A,H)ANTHRACENE	330	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
132-64-9 DIBENZOFURAN	NS	U	U	U	U	U	U	Ü	93	Ü	Ü	U	U	U	U	U	U	U	NA	NA	NA	NA.	NA	NA	NA	NA	NA	NA	NA	NA	NA
84-66-2 DIETHYL PHTHALATE	NS	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
131-11-3 DIMETHYL PHTHALATE	NS	U	U	U	U	U	Ü	U	U	U	U	U	U	U	U	U	U	U	NA	NA	NA	NA	NA	NA	NA.	NA	NA	NA	NA	NA	NA
84-74-2 DI-N-BUTYL PHTHALATE	NS	U	U	U	U	U	Ü	U	U	U	U	U	U	U	U	U	U	U	NA	NA	NA	NA	NA	NA	NA.	NA	NA	NA	NA	NA	NA
117-84-0 DI-N-OCTYLPHTHALATE	NS	U	U	U	U	U	U	U	U	Ü	U	U	U	U	U	U	U	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
206-44-0 FLUORANTHENE	100,000	3,200	U	U	U	U	1,700	420	530	3,700	410	85	460	1,800	2,000	990	5.2	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
86-73-7 FLUORENE 118-74-1 HEYACHLOROBENZENE	100,000 NS	U	U	U	U	U	U	U	U	U	U	U	U	78	1 700	U	U	U	NA NA	NA NA	NA NA	NA NA	NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
		U	Ü		U			U			U		U	U	1,700	690	U	U					NA								
87-68-3 HEXACHLOROBUTADIENE 77-47-4 HEXACHLOROCYCLOPENTADIENE	NS NS	U	U	U	U	U	U	U	U	U	U	U	U	U	1 0	U	U	U	NA NA	NA.	NA.	NA.	NA NA	NA	NA NA	NA.	NA.	NA.	NA NA	NA.	NA NA
	NS NS	U	U	U	U	U	·	U	U	U		U	U	U	U	U	U	U	NA NA	NA	NA NA	NA	NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA	
67-72-1 HEXACHLOROETHANE 193-39-5 INDENO(1.2.3-C.DIPYRENE	NS 500	1,200	U	U	U	U	U 12	1.000	180	U	U 250	U	250	450	920	420	U	U	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
78,59,1 ISOPHORONE	500 NS	1,200	U II	- 0	- 0	U II	12	1,000	180	- 1	250	U	230	450	920	420	U	U	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
78-59-1 ISOPHORONE 91-20-3 NAPHTHALENE	NS 100 000	- 1	U	U U		U	U	U	380	U U	U	80	120	U	- 0	U	U	U II	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
98-95-3 NITROBENZENE	NS	- V	U	Ü	- i	- 0	- 0	- 11	380	II.	- 0	80	11	- 0	Ü	Ü	U.	- 0	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
621.64.7 N.NITROSODLN.PROPVI AMINE	NS NS	- 0	II.	i i	Ü	11	U U	U U	U	ii ii	- 1	Ü	U	II.	i i	U U	II.	II II	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
86-30-6 N-NITROSODIPHENYLAMINE	NS	- i	U	II.	II.	II	ii ii	II .	U	II.	II .	II.	U U	II.	Ü	ii ii	II.	II.	NA	NA.	NA	NA.	NA NA	NA	NA.	NA	NA.	NA.	NA	NA.	NA
87-86-5 PENTACHLOROPHENOL	2,400	Ü	Ü	Ü	Ü	Ü	Ü	Ü	Ü	Ü	Ü	Ü	Ü	Ü	Ü	Ü	U	Ü	NA	NA.	NA.	NA.	NA NA	NA.	NA.	NA.	NA.	NA.	NA	NA NA	NA.
85.01.8 PHENANTHRENE	100 000	1.700	U	II.	II.	II	ii ii	II .	360	II.	310	90	260	1 200	1.400	750	43	II.	NA.	NA.	NA.	NA.	NA.	NA NA	NA.	NA.	NA.	NA.	NA.	NA.	NA.
108-95-2 PHENOL	100,000	U	Ü	Ü	Ü	Ű	Ü	Ü	U	Ü	U	U	U	U.	U	U	U	Ü	NA	NA.	NA.	NA.	NA NA	NA.	NA.	NA.	NA.	NA.	NA	NA NA	NA.
129-00-0 PYRENE	100,000	3.200	U	U	U	Ü	1.700	580	380	3.700	420	81	360	1.500	1.900	950	3.8	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total SVOCs (un/ke)	,		10.700	67.000	79	171,200	263.912	89 500	3.861	123.700	37.510	1.091				30.300	178	130.000	NA	NA	NA	NA	NA.	NA	NA	NA	NA	NA		NA	NΑ

#### **Monitoring Well** ID NO. GMW-1 Page 1 of 1 Groundwater and Environmental Services, Inc. PROJECT: NYSDEC Niagara Highway Garage SURFACE ELEV.: NA TOTAL DEPTH: 9' ADDRESS: 7105 Lockport Road, Niagara Falls, NWATER DEPTH CASING EL.: NA NA JOB NO. 0901588 BOREHOLE DIA.: WELL DIA.: 2" Nicole Lindner Drilling Method: Auger (4 3/4" ID) Logged By: 11/3/14 Dates Drilled: Sampling Method: NA Soil Class. System: NA Drilling Company: TREC Environmental Inc. Field Screening: Drill Rig Type: Geoprobe 6620 DT Sample Field Blow Rec-**COMPLETION DETAILS** SAMPLE LITHOLOGY Stratigraphy Comments (feet) Interval Screen Counts overy 0 NA NA NA NA Road Box (0-0.5') NA Bentonite Seal (0.5-3.5')2" Sched 40 PVC Riser (0.3-4') Sand Pack (3.5-9') 5-2" Sched 40 PVC 0.010 slot Screen (4-9')Well set at encountered bedrock (9' below ground surface) 10 **General Comments:** Symbol Key: Location: Northing/Latitude: NA ID = Inner Diameter Apparent Water Level 💌 HSA = Hollow Stem Auger Easting/Longitude: NA NA = Not Applicable / Not Recorded Horizontal Datum: NA

Template: Soil-Well Boring

GMW-1

p. 1 of 1

Vertical Datum:

NA

#### **Monitoring Well** ID NO. GMW-2 Page 1 of 1 Groundwater and Environmental Services, Inc. PROJECT: NYSDEC Niagara Highway Garage SURFACE ELEV.: NA TOTAL DEPTH: 11' ADDRESS: 7105 Lockport Road, Niagara Falls, NWATER DEPTH CASING EL.: NA NA JOB NO. 0901588 BOREHOLE DIA.: WELL DIA.: 2" Logged By: Nicole Lindner Drilling Method: Auger (4 3/4" ID) 11/3/14 Dates Drilled: Sampling Method: NA Soil Class. System: NA Drilling Company: TREC Environmental Inc. Field Screening: Drill Rig Type: Geoprobe 6620 DT Sample Field Blow Rec-**COMPLETION DETAILS** SAMPLE LITHOLOGY Stratigraphy Comments (feet) Interval Screen Counts overy 0 NA NA NA NA Road Box (0-0.5') NA Bentonite Seal (0.5-5.5')2" Sched 40 PVC Riser (0.3-6') 5-Sand Pack (5.5-11') 2" Sched 40 PVC 0.010 slot Screen (6-11')10 Well set at encountered bedrock (11' below ground **General Comments:** Symbol Key: Location: Northing/Latitude: NA ID = Inner Diameter Apparent Water Level 💌 HSA = Hollow Stem Auger Easting/Longitude: NA NA = Not Applicable / Not Recorded Horizontal Datum: NA Template: Soil-Well Boring Vertical Datum: GMW-2 NA p. 1 of 1

SURFACE ELEV.: NA PROJECT: NYSDEC Niagara Highway Garage TOTAL DEPTH: 6.5' ADDRESS: 7105 Lockport Road, Niagara Falls, NY WATER DEPTH: NA CASING EL.: NAWELL DIA.: JOB NO. 0901588 BOREHOLE DIA .: 6" 2"

Logged By: Nicole Lindner Drilling Method: Auger (4 3/4" ID)

11/4/14 Dates Drilled: Sampling Method: NA Drilling Company: TREC Environmental Inc. Soil Class. System: NA Drill Rig Type: Geoprobe 6620 DT Field Screening: NA

Depth (feet)	Sample Interval	Field Screen	Blow Counts	Rec.	SAMPLE LITHOLOGY	COMMENTS	COMPLETION DETAILS
0-	NA	NA	NA	NA	NA		Road Box (0-0.5')
_							Bentonite Seal (0.5-3')
_							2" Sched 40 PVC Riser (0.3-3.5')
-						No evidence of groundwater observed	
5-							Sand Pack (3-6.5')  2" Sched 40 PVC 0.010 slot Screen (3.5-6.5')
_						Well set at encountered bedrock (6.5' below ground surface)	

Location: **General Comments:** Symbol Key: Northing/Latitude: NA ID = Inner Diameter Easting/Longitude: NA HSA = Hollow Stem Auger

Horizontal Datum: NA NA = Not Applicable / Not Recorded Vertical Datum:

Apparent Water Level Lab Sample Location

GMW-3 p. 1 of 1

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undwater & Environmental Services. Inc. Page 1 of 1

PROJECT: NYSDEC Niagara Highway Garage SURFACE ELEV.: NA TOTAL DEPTH: 7'
ADDRESS: 7105 Lockport Road, Niagara Falls, NY WATER DEPTH: NA CASING EL.: NA
JOB NO. 0901588 BOREHOLE DIA.: 6" WELL DIA.: 2"

Logged By: Nicole Lindner Drilling Method: Auger (4 3/4" ID)

Dates Drilled:11/4/14Sampling Method:NADrilling Company:TREC Environmental Inc.Soil Class. System:NADrill Rig Type:Geoprobe 6620 DTField Screening:NA

Dept (feet	h Sample Interval	Field Screen	Blow Counts	Rec.	SAMPLE LITHOLOGY	COMMENTS	COMPLETION DETAILS
0 5	NA	NA	NA	NA NA	NA NA	No evidence of groundwater observed  Well set at encountered bedrock (7' below	Road Box (0-0.5')  Bentonite Seal (0.5-3.5')  2" Sched 40 PVC Riser (0.3-4')  Sand Pack (3.5-7')  2" Sched 40 PVC 0.010 slot Screen (4-7')
						bedrock (7' below ground surface)	

Location:General Comments:Symbol Key:Northing/Latitude:NAID = Inner DiameterApparent Water LevelEasting/Longitude:NAHSA = Hollow Stem AugerLab Sample Location

Horizontal Datum: NA NA = Not Applicable / Not Recorded

Vertical Datum: NA p. 1 of 1



ID NO.: **GMW-5** 

Page 1 of 1

PROJECT: NYSDEC Niagara Highway Garage SURFACE ELEV.: NA TOTAL DEPTH: 10.2'

ADDRESS: 7105 Lockport Road, Niagara Falls, NY WATER DEPTH: NA CASING ELEV.: NA

JOB NO.: 0901588 BOREHOLE DIAM.: 6" WELL DIAM.: 2"

Logged By: Nicole Lindner Drilling Method: Auger (4 3/4" ID)

Dates Drilled: 11/4/14 Sampling Method: NA
Drilling Company: TREC Environmental Inc. Soil Class. System: NA

Drill Rig Type: Geoprobe 6620 DT Field Screening: MiniRAE 2000 PID w/10.6 eV Lamp

Depth (feet)	Sample Interval	Field Screen	Blow Counts	Rec.	SAMPLE LITHOLOGY	COMMENTS	COMPLETION I	DETAILS
				100% 100% 100% 100% 100% 100% 100% 100%	Gravel: Gravel  Fill: Fill - white amorphous material  Clay: Clay, hard, borwn, dry  Clay: Clay, hard, borwn, wet	Samples collected in 6 inch intervals from 3.5' to 10.2'  Well set with screen at the interface of amorphous material and native material (4.5' below ground surface)	Road Box (0-0.5')  Bentonite Seal (0.5-2') 2" Sched 40 PVC Riser (0.3-2.7')  Sand Pack (2-4.5')  2" Sched 40 PVC 0.010 slot Screen (2.7-4.3')  Sump (4.3-4.5')  Bentonite seal placed from 4.5-10.2' to seal off borehole below constructed well	
10 -		0.0 0.0 0.2 0.1			Clay, Clay, flaid, boliwn, wet			

Location:
Northing/Latitude: NA
Easting/Longitude: NA
Horizontal Datum: NA
Vertical Datum: NA

General Comments: ID = Inner Diameter HSA = Hollow Stem Auger

HSA = Hollow Stem Auger NA = Not Applicable / Not Recorded Symbol Key: Apparent Water Level Lab Sample Location



GMW-5 p. 1 of 1



PROJECT: NYSDEC Niagara Highway Garage SURFACE ELEV.: NA TOTAL DEPTH: 8'
ADDRESS: 7105 Lockport Road, Niagara Falls, NY WATER DEPTH: NA CASING EL.: NA
JOB NO. 0901588 BOREHOLE DIA.: 2" WELL DIA.: NA

Logged By: Eric Popken Drilling Method: Geoprobe (sampling)

Dates Drilled: 9/22/14 Sampling Method: Macro Core
Drilling Company: TREC Environmental Inc. Soil Class. System: Burmister

Drill Rig Type: Geoprobe 6620 DT Field Screening: MiniRAE 2000 PID w/10.6 eV Lamp

	Dilli Rig	турс.	Geoprobe	e 0020 D I	Fleid Screening.	MINIKAE 2000 PID W/10.6	ev Lamp
Depth (feet)	Sample Interval		Blow Counts	Rec.	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0-	0-6"	NA	NA	100%			
					Stone gravel		
	6"-1.5'	0.0	NA	100%	Fine to coarse sand, black, moist to wet	SB-101 (6"-1.5') sampled for lab analysis	NA B
	1.5-4'	0.0	NA	100%	Silty clay, brown, hard, moist		*
	-				□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □		
	_						
	4-6'	0.0	NA	80%	Silty clay, brown, hard, moist		
5-	_				= : =   <del>- : :</del>  - : : :		
	6-8'	0.0	NA	80%	Silty sand and gravel, brown, fine	-	
					to coarse sand, fine to coarse gravel, little clay, moist		
	_						

<u>Location:</u> <u>General Comments:</u> <u>Symbol Key:</u>

 Northing/Latitude:
 NA
 ID = Inner Diameter

 Easting/Longitude:
 NA
 HSA = Hollow Stem Auger

 Horizontal Datum:
 NA
 NA = Not Applicable / Not Recorded

= Hollow Stem Auger Lab Sample Location
Not Applicable / Not Recorded

Apparent Water Level

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Vertical Datum: NA p. 1 of 1

ID NO.: **SB-102** 

Page 1 of 1

PROJECT: NYSDEC Niagara Highway Garage ADDRESS: 7105 Lockport Road, Niagara Falls, NY

JOB NO.: 0901588

SURFACE ELEV .: NA WATER DEPTH: NA BOREHOLE DIAM .: 2" TOTAL DEPTH: 8' CASING ELEV .: NA WELL DIAM.:

Logged By: Eric Popken Drilling Method: Geoprobe (sampling)

9/22/14 Dates Drilled: Sampling Method: Macro Core Drilling Company: TREC Environmental Inc. Soil Class. System: Burmister

Drill Rig Type: Geoprobe 6620 DT Field Screening: MiniRAE 2000 PID w/10.6 eV Lamp

Depth (feet)	Sample Interval	Field Screen	Blow Counts	Rec.	SAMPLE LITHOLOGY	COMMENTS	COMPLETION [	DETAILS
0-7	0-6"	NA	NA	100%			I	
				100%	Stone gravel	CD 404 (Cll Ol) a provided	ALA	<b>X</b>
-	6"-2'	0.0	NA		Fill, black, contain, trace to little white amprphous material, trace debris, slight odor	SB-101 (6"-2') sampled for lab analysis	NA	
_	2-4'	0.0	NA	100%	Clay, brown, hard, slight odor, possible slough carried by probe, dry to moist			¥
5-	4-6'	0.0	NA	100%	Clay, brown, hard, slight odor, possible slough carried by probe, dry to moist			*
-	6-8'	0.0	NA	100%	Silt and sand, brown, fine to coarse sand, fine to coarse gravel, trace clay, moist			

Location: **General Comments:** Northing/Latitude: NA ID = Inner Diameter Easting/Longitude: NA HSA = Hollow Stem Auger Horizontal Datum: NA NA = Not Applicable / Not Recorded Vertical Datum:

Symbol Key: Apparent Water Level Lab Sample Location

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SB-102 p. 1 of 1 Logged By:

Dates Drilled:

ID NO.: **SB-103** 

TOTAL DEPTH: 10'

CASING ELEV .: NA

WELL DIAM.:

Page 1 of 1

PROJECT: NYSDEC Niagara Highway Garage ADDRESS: 7105 Lockport Road, Niagara Falls, NY

JOB NO.: 0901588

Eric Popken

9/22/14

Drilling Company: TREC Environmental Inc.

SURFACE ELEV .: NA WATER DEPTH: NA

BOREHOLE DIAM .: 2"

Drilling Method: Geoprobe (sampling)

Sampling Method: Macro Core Soil Class. System: Burmister

Drill Rig Type: Geoprobe 6620 DT Field Screening: MiniRAE 2000 PID w/10.6 eV Lamp

Depth (feet)	Sample Interval	Field Screen	Blow Counts	Rec.	SAMPLE LITHOLOGY	COMMENTS	COMPLETION DETAILS
0¬	0-2'	0.0	NA	100%			
-			INA		brown to black, trace white amporphos material	SB-103 (0-2') sampled for lab analysis	NA
	2-4'	0.0	NA	100%	hard		<b>Y</b>
5-	4-7'	0.0	NA	100%	Silty clay, brown, trace organics, hard  History		
	7-8'	0.0	NA		Sand, brown, fine to medium sand, trace gravel, moist		
10 –	8-10'	NA	NA		Sand, brown, fine to medium sand, trace to little gravel, trace to little silt, moist		
-						Refusal - dolomite in shoe	

Location: **General Comments:** Northing/Latitude: NA ID = Inner Diameter Easting/Longitude: NA HSA = Hollow Stem Auger Horizontal Datum: NA

Vertical Datum:

NA = Not Applicable / Not Recorded

Symbol Key: Apparent Water Level Lab Sample Location



SB-103 p. 1 of 1

SURFACE ELEV.: NA PROJECT: NYSDEC Niagara Highway Garage TOTAL DEPTH: 8' ADDRESS: 7105 Lockport Road, Niagara Falls, NY WATER DEPTH: NA CASING EL.: NA JOB NO. 0901588 BOREHOLE DIA .: 2" WELL DIA.: NA

Logged By: **Eric Popken** Drilling Method: Geoprobe (sampling)

Dates Drilled: 9/22/14 Sampling Method: Macro Core Drilling Company: TREC Environmental Inc. Soil Class. System: Burmister

Drill Rig Type: Field Screening: MiniRAE 2000 PID w/10.6 eV Lamp Geoprobe 6620 DT

	Dilli Rig	туре.	Geoprob	e 6620 D I	Fleid Screening.	WIINIKAE 2000 PID W/10.0	еч цашр
Depth (feet)		Field Screen	Blow Counts	Rec.	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0-	0-6"	NA	NA	100%	Fill, gravel	Refusal at three feet, passed through on second try (rock)	N. A. BES
	6"-2'				Sand and gravel, brown to black, fine to coarse sand, trace debris	second try (rock) SB-104 (6"-2") sampled for lab analysis	NA zz
	- 2-4'	0.0	NA	100%	Silty clay, brown, hard  Silty clay, brown, hard  Silty clay, brown, hard		<b>Y</b>
5-	4-6'	0.0	NA	100%	Clay, brown, boulders encountered, hard		
	- - -	NA	NA	100%	Sand and gravel, brown, fine to coarse sand, fine to coarse gravel, moist		

Location: **General Comments:** Symbol Key:

Northing/Latitude: NA ID = Inner Diameter Easting/Longitude: NA HSA = Hollow Stem Auger

Horizontal Datum: NA = Not Applicable / Not Recorded NA

Vertical Datum: NA Apparent Water Level ¥ Lab Sample Location  $\mathbb{X}$ 

SB-104 p. 1 of 1

ID NO.: **SB-105** 

Page 1 of 1

PROJECT: NYSDEC Niagara Highway Garage SURFACE ELEV .: NA ADDRESS: 7105 Lockport Road, Niagara Falls, NY

WATER DEPTH: NA BOREHOLE DIAM .: 2" TOTAL DEPTH: 4' CASING ELEV .: NA

JOB NO.: 0901588 Logged By:

Eric Popken

Drilling Method:

WELL DIAM.:

Dates Drilled:

9/22/14

Sampling Method:

Geoprobe (sampling)

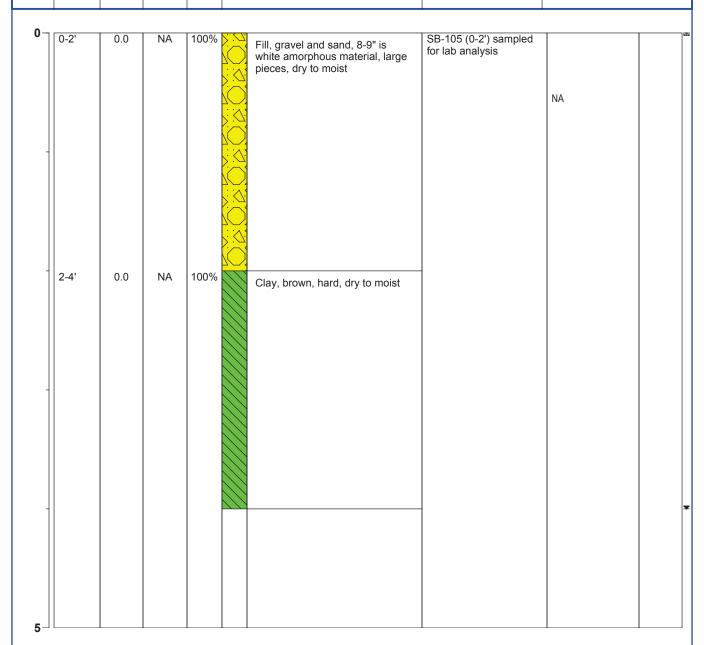
Drilling Company: TREC Environmental Inc.

Soil Class. System: Burmister

Drill Rig Type: Geoprobe 6620 DT Field Screening: MiniRAE 2000 PID w/10.6 eV Lamp

Macro Core

Depth	Sample	Field	Blow				
(feet)	Interval	Screen	Counts	Rec.	SAMPLE LITHOLOGY	COMMENTS	COMPLETION DETAILS



**General Comments:** Location: Northing/Latitude: NA ID = Inner Diameter Easting/Longitude: NA HSA = Hollow Stem Auger Horizontal Datum: NA NA = Not Applicable / Not Recorded

Apparent Water Level Lab Sample Location

Symbol Key:

Vertical Datum:

SB-105 p. 1 of 1

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Lab Sample Location

PROJECT: NYSDEC Niagara Highway Garage SURFACE ELEV.: NA TOTAL DEPTH: 8'
ADDRESS: 7105 Lockport Road, Niagara Falls, NY WATER DEPTH: NA CASING EL.: NA
JOB NO. 0901588 BOREHOLE DIA.: 2" WELL DIA.: NA

Logged By: Eric Popken Drilling Method: Geoprobe (sampling)

Dates Drilled: 9/22/14 Sampling Method: Macro Core
Drilling Company: TREC Environmental Inc. Soil Class. System: Burmister

Drill Rig Type: Geoprobe 6620 DT Field Screening: MiniRAE 2000 PID w/10.6 eV Lamp

Depth (feet)	Sample Interval		Blow Counts	Rec.	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0-	0-6"	NA	NA	100%	Fill debris, black		
-	6"-2'	0.0	NA	100%	Fill, white amorphous material, odor, dry to moist	3-106 (6"-2') sampled r lab analysis	NA 8
-	2-4'	0.0	NA	100%	Clay, brown, hard		
5-	4-6'	0.0	NA	100%	Clay, brown, hard		
-	6-8'	0.0	NA	100%	Silty sand, brown, fine to coarse sand, fine to coarse gravel, trace clay, moist		

Northing/Latitude: NA ID = Inner Diameter

Easting/Longitude: NA HSA = Hollow Stem Auger

Horizontal Datum: NA NA = Not Applicable / Not Recorded

Vertical Datum: NA p. 1 of 1



ID NO.: **SB-107** 

Page 1 of 1

PROJECT: NYSDEC Niagara Highway Garage ADDRESS: 7105 Lockport Road, Niagara Falls, NY

WATER DEPTH: NA BOREHOLE DIAM .: 2"

SURFACE ELEV .: NA

TOTAL DEPTH: 4' CASING ELEV .: NA

JOB NO.: 0901588

Logged By:

Eric Popken

WELL DIAM.:

Dates Drilled:

9/22/14 Sampling Method:

Geoprobe (sampling) Macro Core

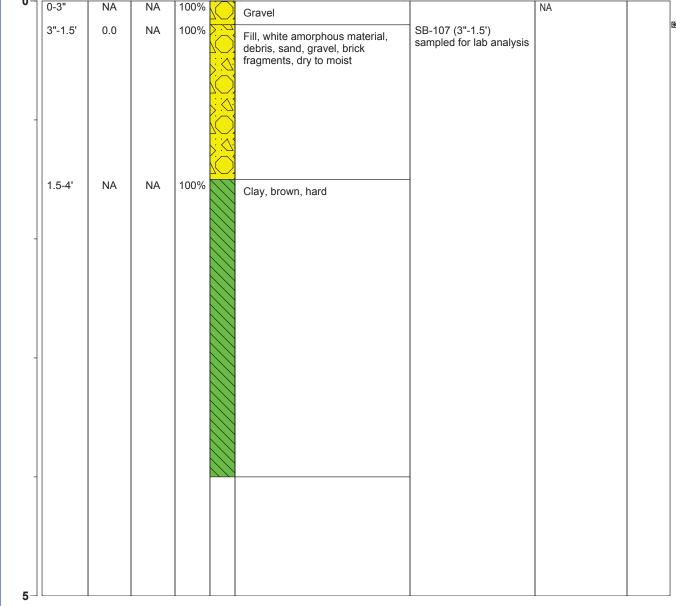
Drilling Company: TREC Environmental Inc. Drill Rig Type: Geoprobe 6620 DT

Soil Class. System: Burmister

Field Screening: MiniRAE 2000 PID w/10.6 eV Lamp

Depth (feet)	Sample Interval	Field Screen	Blow Counts	Rec.		SAMPLE LITHOLOGY	COMMENTS	COMPLETION D	DETAILS	}
0_										
	0-3"	NA	NA	100%		Gravel		NA		NT2
	3"-1.5'	0.0	NA	100%	\.\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Fill white amorphous material	SB-107 (3"-1.5')			***

Drilling Method:



**General Comments:** Location: ID = Inner Diameter Northing/Latitude: NA Easting/Longitude: NA HSA = Hollow Stem Auger Horizontal Datum: NA NA = Not Applicable / Not Recorded Symbol Key: Apparent Water Level Lab Sample Location

p. 1 of 1

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Vertical Datum:

SB-107

SURFACE ELEV.: NA PROJECT: NYSDEC Niagara Highway Garage TOTAL DEPTH: 8' ADDRESS: 7105 Lockport Road, Niagara Falls, NY WATER DEPTH: NA CASING EL.: NAJOB NO. 0901588 BOREHOLE DIA .: 2" WELL DIA.: NA

Logged By: **Eric Popken** Drilling Method: Geoprobe (sampling)

Dates Drilled: 9/22/14 Sampling Method: Macro Core Drilling Company: TREC Environmental Inc. Soil Class. System: Burmister

Drill Rig Type: Field Screening: MiniRAE 2000 PID w/10.6 eV Lamp Geoprobe 6620 DT

	Dilli Rig	i ype.	Geoprob	e 6620 D I	Fleid Screening.	MINIKAE 2000 PID W/10.0	o ev Lamp
Depth (feet)	Sample Interval	Field Screen	Blow Counts	Rec.	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0-	0-1'	NA	NA	90%	Fill , black, gravel, fine to coarse sand, trace debris		NA
	1-2'	0.0	NA	90%	Fill, with white amorphous material, slight odor	SB-108 (1-2') sampled for lab analysis	593
	- 2-4'	NA	NA	90%	Clay, brown, trace gravel, hard, dry to moist		
5-	- 4-8'	0.0	NA	100%	Clayey silt, brown, little fine to medium sand, dry to moist  Clayey silt, brown, little fine to medium sand, dry to moist		

Location: **General Comments:** Symbol Key:

Northing/Latitude: NA ID = Inner Diameter Easting/Longitude: NA HSA = Hollow Stem Auger

Horizontal Datum: NA = Not Applicable / Not Recorded NA

Vertical Datum:

NA

SB-108 p. 1 of 1

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Apparent Water Level

Lab Sample Location

ID NO.: **SB-109** 

Page 1 of 1

PROJECT: NYSDEC Niagara Highway Garage ADDRESS: 7105 Lockport Road, Niagara Falls, NY

WATER DEPTH: NA BOREHOLE DIAM .: 2" TOTAL DEPTH: 4' CASING ELEV .: NA

JOB NO.: 0901588

Drill Rig Type:

Eric Popken

Geoprobe 6620 DT

SURFACE ELEV .: NA

WELL DIAM.:

Logged By: Dates Drilled:

Drilling Method: 9/22/14

Sampling Method: Macro Core

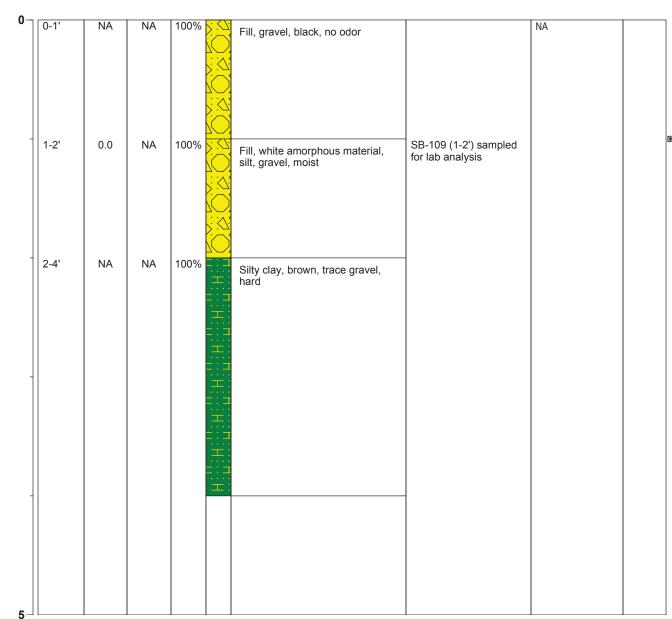
Geoprobe (sampling)

Drilling Company: TREC Environmental Inc.

Soil Class. System: Burmister

Field Screening: MiniRAE 2000 PID w/10.6 eV Lamp

Depth (feet)	Sample Interval	Field Screen	Blow Counts	Rec.	SAMPLE LITHOLOGY	COMMENTS	COMPLETION DETAILS



**General Comments:** Location: Northing/Latitude: NA ID = Inner Diameter Easting/Longitude: NA HSA = Hollow Stem Auger Horizontal Datum: NA NA = Not Applicable / Not Recorded

Vertical Datum:

Symbol Key: Apparent Water Level Lab Sample Location

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SB-109 p. 1 of 1 Groundwater & Environmental Services, Inc.

Page 1 of 1

SURFACE ELEV.: NA PROJECT: NYSDEC Niagara Highway Garage TOTAL DEPTH: 8' ADDRESS: 7105 Lockport Road, Niagara Falls, NY WATER DEPTH: NA CASING EL.: NA JOB NO. 0901588 BOREHOLE DIA .: 2" WELL DIA.: NA

Logged By: **Eric Popken** Drilling Method: Geoprobe (sampling)

Dates Drilled: 9/22/14 Sampling Method: Macro Core Drilling Company: TREC Environmental Inc. Soil Class. System: Burmister

Drill Rig Type: Field Screening: MiniRAE 2000 PID w/10.6 eV Lamp Geoprobe 6620 DT

	Dilli Rig	i ype.	Geoprob	e 6620 D I	Fleid Screening.	MINIKAE 2000 PID W/10.0	ev Lamp
Depth (feet)	Sample Interval		Blow Counts	Rec.	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0-	0-1'	NA	NA	90%	Fill, brownish grey, sand and gravel, brick fragments, debris		NA
	1-2'	0.0	NA	90%	Fill, with white amorphous material, dry	SB-110 (1-2') sampled for lab analysis	NA 88
	_ 2-4'	0.0	NA	90%	Silty clay, brown, hard, dry to moist		
5-	4-8'	0.0	NA	100%	Silty clay, brown, hard		Y
	-	0.0	NA		Clayey silt, brown, little fine to coarse sand		
					±:		

Location: **General Comments:** Symbol Key:

Northing/Latitude: NA ID = Inner Diameter Easting/Longitude: NA HSA = Hollow Stem Auger

Horizontal Datum: NA = Not Applicable / Not Recorded NA

Vertical Datum:

NA

SB-110 p. 1 of 1

Apparent Water Level

Lab Sample Location

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 $\mathbb{X}$ 



Depth Sample Field

ID NO.: **SB-111** 

Page 1 of 1

PROJECT: NYSDEC Niagara Highway Garage ADDRESS: 7105 Lockport Road, Niagara Falls, NY

JOB NO.: 0901588

Blow

SURFACE ELEV.: NA WATER DEPTH: NA BOREHOLE DIAM.: 2"

TOTAL DEPTH: 4'
CASING ELEV.: NA
WELL DIAM.: NA

Logged By: Eric Popken Drilling Method: Geoprobe (sampling)

Dates Drilled: 9/22/14 Sampling Method: Macro Core
Drilling Company: TREC Environmental Inc. Soil Class. System: Burmister

Drill Rig Type: Geoprobe 6620 DT Field Screening: MiniRAE 2000 PID w/10.6 eV Lamp

(feet)	Interval	Screen	Counts	Rec.	SAMPLE LITHOLOGY	COMMENTS	COMPLETION D	DETAILS	,
0¬									
0-	0-0.5'	NA	NA	100%	Fill, gravel, brown		NA		
-	0.5-2'	0.0	NA	100%	Fill, with white amorphous material, dry	SB-111 (0.5-2') sampled for lab analysis			
5	2-4'	0.0	NA	100%	Clay, brown, hard, moist				

 Location:
 General Comments:

 Northing/Latitude:
 NA
 ID = Inner Diameter

 Easting/Longitude:
 NA
 HSA = Hollow Stem Auger

 Horizontal Datum:
 NA
 NA = Not Applicable / Not Recorded

 Vertical Datum:
 NA

Symbol Key: Apparent Water Level Lab Sample Location

 $\mathbb{H}$ 

SB-111 p. 1 of 1



SURFACE ELEV.: NA PROJECT: NYSDEC Niagara Highway Garage TOTAL DEPTH: 8' ADDRESS: 7105 Lockport Road, Niagara Falls, NY WATER DEPTH: NA CASING EL.: NA JOB NO. 0901588 BOREHOLE DIA .: 2" WELL DIA.: NA

Logged By: **Eric Popken** Drilling Method: Geoprobe (sampling)

Dates Drilled: 9/22/14 Sampling Method: Macro Core Drilling Company: TREC Environmental Inc. Soil Class. System: Burmister

Drill Rig Type: Field Screening: MiniRAE 2000 PID w/10.6 eV Lamp Geoprobe 6620 DT

	Dilli Rig	туре.	Geopropo	e 0020 D I	Field Screening.	MINIKAE 2000 PID W/10.6	ev Lamp
Depth (feet)	Sample Interval		Blow Counts	Rec.	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0-	0-0.5'	NA	NIA	14000/			1
	0-0.5	NA	NA	100%	Fill, dark brown		
	0.5-1'	0.0	NA	100%	Fill, with white amorphous material, clayey silt, dry to moist	SB-112 (0.5-1') sampled for lab analysis	NA BS
	1-4'	0.0	NA	100%	Silty clay, brown, dry to moist	-	
					±:		
					:- <del>.</del> - <del>.:</del> :		
					=:⊐ -=:		
					: <del> </del>		
	4-6'	8.0	NA	100%	Silty clay, brown, dry to moist		•
					Silty clay, brown, dry to moist		
_					⊒: ⊒ ::::: :::::		
5-							
					: <del>:::</del> : =:: <del>::</del>		
	6-8'	0.0	NA	100%	Clayey silt, brown, trace gravel,	-	
					trace fine to medium sand, appears to be till		
					-::- <del>1</del> -:::		
					::⊐ :::::		
					=== ==================================		
					<u> </u>		

Location: **General Comments:** Symbol Key:

Northing/Latitude: NAID = Inner Diameter Easting/Longitude: NA HSA = Hollow Stem Auger Horizontal Datum:

NA = Not Applicable / Not Recorded NAVertical Datum: NA

Apparent Water Level ¥ Lab Sample Location  $\mathbb{X}$ 

SB-112 p. 1 of 1



Depth Sample Field

ID NO.: **SB-113** 

Page 1 of 1

PROJECT: NYSDEC Niagara Highway Garage ADDRESS: 7105 Lockport Road, Niagara Falls, NY

JOB NO.: 0901588

Blow

WATER DEPTH: NA BOREHOLE DIAM.: 2"

SURFACE ELEV .: NA

TOTAL DEPTH: 4'
CASING ELEV.: NA
WELL DIAM.: NA

Logged By: Eric Popken Drilling Method: Geoprobe (sampling)

Dates Drilled: 9/22/14 Sampling Method: Macro Core
Drilling Company: TREC Environmental Inc. Soil Class. System: Burmister

Drill Rig Type: Geoprobe 6620 DT Field Screening: MiniRAE 2000 PID w/10.6 eV Lamp

erval Scr	reen C	Counts	Rec.	SAMPLE LITHOLOGY	COMMENTS	COMPLETION DETAILS
	NA		100%	ini, biowii to black		NA
' 15	5.5			material material	SB-113 (1-2') sampled for lab analysis	<b>S</b> 8
, 0	0.1	NA	100%	Silty clay, brown, hard		
•					0.1 NA 100% Silty clay, brown, hard	0.1 NA 100%  Silty clay, brown, hard

 $\begin{tabular}{llll} \underline{Location:} & \underline{General\ Comments:} \\ Northing/Latitude: \ NA & ID = Inner\ Diameter \\ Easting/Longitude: \ NA & HSA = Hollow\ Stem\ Auger \\ Horizontal\ Datum: \ NA & NA = Not\ Applicable\ /\ Not\ Recorded \\ \end{tabular}$ 

Apparent Water Level
Lab Sample Location

 $\mathbb{X}$ 

Symbol Key:

Vertical Datum: NA SB-113 p. 1 of 1



SURFACE ELEV.: NA PROJECT: NYSDEC Niagara Highway Garage TOTAL DEPTH: 8' ADDRESS: 7105 Lockport Road, Niagara Falls, NY WATER DEPTH: NA CASING EL.: NA JOB NO. 0901588 BOREHOLE DIA .: 2" WELL DIA.: NA

Logged By: **Eric Popken** Drilling Method: Geoprobe (sampling)

Dates Drilled: 9/22/14 Sampling Method: Macro Core Drilling Company: TREC Environmental Inc. Soil Class. System: Burmister

Drill Rig Type: Geoprobe 6620 DT Field Screening: MiniRAE 2000 PID w/10.6 eV Lamp

	Drill Rig	Type:	Geoprob	e 6620 DT	Field Screening:	MiniRAE 2000 PID w/10.0	eV Lamp
Depth (feet)		Field Screen	Blow Counts	Rec.	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
0-	0-1'	NA	NA	100%	Fill, brown, gravel, fine to coarse clayey silt, trace debris		NA
	1-2'	12.6	NA	100%	Fill, white amorphous material and fill	SB-114 (1-2') sampled for lab analysis	<b>38</b> 3
	- 2-4'	0.1	NA	100%	Clay, brown, hard		
5-	- 4-6'	0.0	NA	NA	Clay, brown, hard		
	- 6-8'	0.0	NA	NA	Till, brown, silt and fine to coarse sand, trace gravel, dry to moist		

Location: **General Comments:** Symbol Key:

Northing/Latitude: NA ID = Inner Diameter Easting/Longitude: NA HSA = Hollow Stem Auger Horizontal Datum:

NA = Not Applicable / Not Recorded NA

Vertical Datum: NA SB-114

p. 1 of 1

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 $\mathbb{X}$ 

Apparent Water Level

Lab Sample Location



Blow

Depth Sample Field

ID NO.: **SB-115** 

Page 1 of 1

PROJECT: NYSDEC Niagara Highway Garage

ADDRESS: 7105 Lockport Road, Niagara Falls, NY

JOB NO.: 0901588

SURFACE ELEV.: NA

WATER DEPTH: 4'

CASING ELEV.: NA

BOREHOLE DIAM.: 2"

WELL DIAM.: NA

Logged By: Eric Popken Drilling Method: Geoprobe (sampling)

Dates Drilled: 9/22/14 Sampling Method: Macro Core
Drilling Company: TREC Environmental Inc. Soil Class. System: Burmister

Drill Rig Type: Geoprobe 6620 DT Field Screening: MiniRAE 2000 PID w/10.6 eV Lamp

(feet)	Interval	Screen	Counts	Rec.	SAMPLE LITHOLOGY	COMMENTS	COMPLETION [	DETAILS
0¬	'			•				
0-	0-1'	0.2	NA	100%	Fill, gravel and fine to coarse sand, fine to coarse gravel, trace debris, dry to moist	No sample for lab analysis	NA	
	1-2'	4.1	NA	100%	Fill, white amorphous material			
5	2-4'	0.0	NA	100%	Clay, brown, hard			

Apparent Water Level
Lab Sample Location

p. 1 of 1

 $\mathbb{X}$ 

Vertical Datum: NA

SB-115

Symbol Key:



ID NO.: **SB-116** 

Page 1 of 1

PROJECT: NYSDEC Niagara Highway Garage SURFACE ELEV .: NA ADDRESS: 7105 Lockport Road, Niagara Falls, NY

Eric Popken

Blow

9/22/14

WATER DEPTH: NA BOREHOLE DIAM .: 2" TOTAL DEPTH: 10' CASING ELEV .: NA

WELL DIAM.:

JOB NO.: 0901588 Logged By:

Dates Drilled:

Depth Sample Field

Drilling Method:

Geoprobe (sampling) Sampling Method: Macro Core

Drilling Company: TREC Environmental Inc. Soil Class. System: Burmister Drill Rig Type: Geoprobe 6620 DT

Field Screening: MiniRAE 2000 PID w/10.6 eV Lamp

Interval	Screen	Counts	Rec.	SAMPLE LITHOLOGY	COMMENTS	COMPLETION DETAILS
0-2" 2-6"	NA 5.5	NA NA	100% 100%	Fill, gravel and hard clay	No sample for lab analysis	
6"-4'	0.0	NA	100%	Fill, with white amorphous material, dry		NA
				Clay, brown, hard		
4-6'	0.0	NΔ	100%			
7-0	0.0	14/-4	10070	Clay, brown, hard		
6-8'	NA	NA	100%	Till, brown		
8-9.9'	NA	NA	100%	Till, brown		
					Refusal at 9.9'	
022	0-2" 2-6" 6"-4'	Screen			Interval Screen Counts Rec. SAMPLE LITHOLOGY  D-2" NA 5.5 NA 100% Fill, gravel and hard clay Fill, with white amorphous material, dry  Clay, brown, hard  Clay, brown, hard  Till, brown	Interval Screen Counts Rec. SAMPLE LITHOLOGY COMMENTS  3-2° NA NA 100% Fill, gravel and hard clay Fill, with white amorphous material, dry  Clay, brown, hard  4-6' 0.0 NA 100% Clay, brown, hard  6-8' NA NA 100% Till, brown  Till, brown  Till, brown

Northing/Latitude: NA Easting/Longitude: NA Horizontal Datum: NA Vertical Datum:

Location:

**General Comments:** ID = Inner Diameter HSA = Hollow Stem Auger NA = Not Applicable / Not Recorded Symbol Key: Apparent Water Level Lab Sample Location

 $\mathbb{X}$ 

SB-116 p. 1 of 1



ID NO.: **SB-117** 

Page 1 of 1

PROJECT: NYSDEC Niagara Highway Garage ADDRESS: 7105 Lockport Road, Niagara Falls, NY

Geoprobe 6620 DT

WATER DEPTH: NA BOREHOLE DIAM .: 2"

SURFACE ELEV .: NA

TOTAL DEPTH: 4' CASING ELEV .: NA

WELL DIAM.:

JOB NO.: 0901588

Logged By:

Dates Drilled:

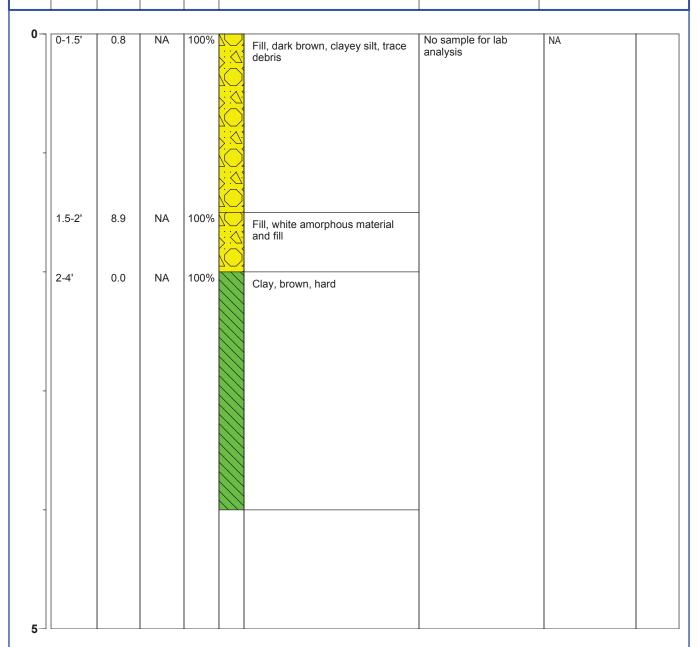
Eric Popken Drilling Method: Geoprobe (sampling)

> Sampling Method: Macro Core Soil Class. System: Burmister

9/22/14 Drilling Company: TREC Environmental Inc. Drill Rig Type:

Field Screening: MiniRAE 2000 PID w/10.6 eV Lamp

	Sample Interval	Field Screen	Blow Counts	Rec.	SAMPLE LITHOLOGY	COMMENTS	COMPLETION DETAILS
--	--------------------	-----------------	----------------	------	------------------	----------	--------------------



**General Comments:** Location: Northing/Latitude: NA ID = Inner Diameter Easting/Longitude: NA HSA = Hollow Stem Auger Horizontal Datum: NA NA = Not Applicable / Not Recorded Vertical Datum:

Symbol Key: Apparent Water Level Lab Sample Location

 $\mathbb{X}$ 

SB-117 p. 1 of 1



SURFACE ELEV.: NA PROJECT: NYSDEC Niagara Highway Garage TOTAL DEPTH: 8' ADDRESS: 7105 Lockport Road, Niagara Falls, NY WATER DEPTH: NA CASING EL.: NA JOB NO. 0901588 BOREHOLE DIA .: 2" WELL DIA.: NA

Logged By: **Eric Popken** Drilling Method: Geoprobe (sampling)

Dates Drilled: 9/22/14 Sampling Method: Macro Core Drilling Company: TREC Environmental Inc. Soil Class. System: Burmister

Drill Rig Type: Field Screening: MiniRAE 2000 PID w/10.6 eV Lamp Geoprobe 6620 DT

O -2.5' 0.8 NA 75% Fill, dark brown, fine to coarse sand, fine to coarse gravel, trace organics, large brick fragments, no white material NA		Dilli Rig	rype.	Geoprob	e 6620 D	Fleid Screening.	MINIKAE 2000 PID W/10	J.6 ev Lamp
2.5-4' 0.0 NA 75% Fill, dark brown, fine to coarse sand, fine to coarse gravel, trace organics, large brick fragments, no white material NA	Depth (feet)	Sample Interval	Field Screen	Blow Counts	Rec.	SAMPLE LITHOLOGY	Comments	COMPLETION DETAILS
2.5-4' 0.0 NA 75% Clay	0-	0-2.5'	0.8	NA	75%	Fill, dark brown, fine to coarse sand, fine to coarse gravel, trace organics, large brick fragments,	No sample for lab analysis	NA.
- Clay		-				no white material		NA
		-						
5- 4-6' 0.0 NA 100% Clay	5-		0.0	NA	100%	Clay		
6-8' 0.0 NA 100% Till		6-8'	0.0	NA	100%	Till		

Location: **General Comments:** Symbol Key:

Northing/Latitude: NA ID = Inner Diameter Easting/Longitude: NA HSA = Hollow Stem Auger

Horizontal Datum: NA = Not Applicable / Not Recorded NA

Vertical Datum: NA Apparent Water Level ¥ Lab Sample Location  $\mathbb{X}$ 

SB-118 p. 1 of 1

ID NO.: **SB-119** 

Page 1 of 1

TOTAL DEPTH: 4' PROJECT: NYSDEC Niagara Highway Garage SURFACE ELEV .: NA WATER DEPTH: NA CASING ELEV .: NA ADDRESS: 7105 Lockport Road, Niagara Falls, NY BOREHOLE DIAM .: 2" JOB NO.: 0901588 WELL DIAM.:

Logged By: Eric Popken Drilling Method: Geoprobe (sampling)

9/23/14 Dates Drilled: Sampling Method: Macro Core Drilling Company: TREC Environmental Inc. Soil Class. System: Burmister

Drill Rig Type: Geoprobe 6620 DT Field Screening: MiniRAE 2000 PID w/10.6 eV Lamp

Depth (feet)	Sample Interval	Field Screen	Blow Counts	Rec.	SAMPLE LITHOLOGY	COMMENTS	COMPLETION DETAILS
0¬							
-	0-2'	0.3	NA	100%	sand, fine to coarse gravel, trace organics, trace debris, no white material	No sample for lab analysis	NA
5	2-4'	0.4	NA	100%	Clay, brown, hard, dry to moist		

Location: **General Comments:** Northing/Latitude: NA ID = Inner Diameter Easting/Longitude: NA HSA = Hollow Stem Auger Horizontal Datum: NA NA = Not Applicable / Not Recorded

Apparent Water Level Lab Sample Location

Symbol Key:

 $\mathbb{X}$ 

Vertical Datum: SB-119 p. 1 of 1 Blow

Depth Sample Field

ID NO.: **SB-120** 

Page 1 of 1

PROJECT: NYSDEC Niagara Highway Garage SURFACE ELEV.: NA TOTAL DEPTH: 7.4'

ADDRESS: 7105 Lockport Road, Niagara Falls, NY WATER DEPTH: NA CASING ELEV.: NA

JOB NO.: 0901588 BOREHOLE DIAM.: 2" WELL DIAM.: NA

Logged By: Eric Popken Drilling Method: Geoprobe (sampling)

Dates Drilled: 9/23/14 Sampling Method: Macro Core
Drilling Company: TREC Environmental Inc. Soil Class. System: Burmister

Drill Rig Type: Geoprobe 6620 DT Field Screening: MiniRAE 2000 PID w/10.6 eV Lamp

(feet)	Interval	Screen	Counts	Rec.	SAMPLE LITHOLOGY	COMMENTS	COMPLETION DETAILS
0							
0	0-2'	0.0	NA	80%	fine to coarse graver, fine to coarse graver, fine to coarse sand, trace debris, trace organics, no white material, dry to moist	No sample for lab analysis	NA
_	2-4'	0.0	NA	80%	Clay, brown, trace fine gravel, hard		
5-	4-7.4'	0.0	NA	NA	Till, brown, fine to coarse sand, clayey silt, trace gravel, moist, possible bedrock in show, appears to be dolostone	Refusal at 7.4'	

 $\begin{tabular}{llll} \underline{Location:} & \underline{General\ Comments:} \\ Northing/Latitude: \ NA & ID = Inner\ Diameter \\ Easting/Longitude: \ NA & HSA = Hollow\ Stem\ Auger \\ Horizontal\ Datum: \ NA & NA = Not\ Applicable\ /\ Not\ Recorded \\ \end{tabular}$ 

= Hollow Stem Auger Lab Sample Location
Not Applicable / Not Recorded

Symbol Key:

Apparent Water Level

 $\mathbb{X}$ 

Vertical Datum: NA SB-120 p. 1 of 1

Blow

Depth Sample Field

ID NO.: **SB-121** 

Page 1 of 1

PROJECT: NYSDEC Niagara Highway Garage SURFACE ELEV.: NA TOTAL DEPTH: 4'

ADDRESS: 7105 Lockport Road, Niagara Falls, NY WATER DEPTH: NA CASING ELEV.: NA

JOB NO.: 0901588 BOREHOLE DIAM.: 2" WELL DIAM.: NA

Logged By: Eric Popken Drilling Method: Geoprobe (sampling)

Dates Drilled: 9/23/14 Sampling Method: Macro Core
Drilling Company: TREC Environmental Inc. Soil Class. System: Burmister

Drill Rig Type: Geoprobe 6620 DT Field Screening: MiniRAE 2000 PID w/10.6 eV Lamp

(feet)	Interval	Screen	Counts	Rec.	SAMPLE LITHOLOGY	COMMENTS	COMPLETION DETAILS	}
0¬								
	0-2'	0.0	NA	100%	Fill, dark brown, fine to co sand, fine to coarse grave to little silt, trace debris, n material, dry	Arse analysis  No sample for lab analysis  o white	NA	
5	2-4'	0.0	NA	100%	Clay, brown, trace gravel, dry to moist	hard,		

 Location:
 General Comments:

 Northing/Latitude:
 NA

 Easting/Longitude:
 NA

 Horizontal Datum:
 NA

 NA = Not Applicable / Not Recorded

Symbol Key: Apparent Water Level Lab Sample Location

p. 1 of 1

 $\mathbb{X}$ 

Vertical Datum: N

SB-121



Logged By:

Dates Drilled:

ID NO.: **SB-122** 

Page 1 of 1

PROJECT: NYSDEC Niagara Highway Garage ADDRESS: 7105 Lockport Road, Niagara Falls, NY

JOB NO.: 0901588

Eric Popken

9/23/14

Drilling Company: TREC Environmental Inc.

WATER DEPTH: NA BOREHOLE DIAM.: 2"

SURFACE ELEV .: NA

TOTAL DEPTH: 8'
CASING ELEV.: NA

WELL DIAM.:

Drilling Method: Geoprobe (sampling)

Sampling Method: Macro Core
Soil Class. System: Burmister

Drill Rig Type: Geoprobe 6620 DT Field Screening: MiniRAE 2000 PID w/10.6 eV Lamp

Depth (feet)	Sample Interval	Field Screen	Blow Counts	Rec.	SAMPLE LITHOLOGY	COMMENTS	COMPLETION DETAILS
0¬	0-2'	0.4	NIA.	1000/		No complete lab	I NA
-		0.1	NA	100%	silty sand, trace brick fragments, dry	No sample for lab analysis	NA
_	2-4'	0.0	NA	100%	Clay, blown, nard		
5-	4-8'	0.0	NA	100%	Clay, brown, hard		

 Location:
 General Comments:

 Northing/Latitude:
 NA
 ID = Inner Diameter

 Easting/Longitude:
 NA
 HSA = Hollow Stem Auger

 Horizontal Datum:
 NA
 NA = Not Applicable / Not Recorded

 Vertical Datum:
 NA

Apparent Water Level
Lab Sample Location

Symbol Key:

p. 1 of 1

 $\mathbb{X}$ 

ID NO.: **SB-123** 

TOTAL DEPTH: 4'

WELL DIAM.:

CASING ELEV .: NA

Page 1 of 1

PROJECT: NYSDEC Niagara Highway Garage ADDRESS: 7105 Lockport Road, Niagara Falls, NY

JOB NO.: 0901588

Logged By: Eric Popken Drilling Method: Geoprobe (sampling)

9/23/14 Dates Drilled: Sampling Method: Macro Core Drilling Company: TREC Environmental Inc. Soil Class. System: Burmister

Drill Rig Type: Geoprobe 6620 DT Field Screening: MiniRAE 2000 PID w/10.6 eV Lamp

SURFACE ELEV .: NA WATER DEPTH: NA

BOREHOLE DIAM .: 2"

Depth (feet)	Sample Interval	Field Screen	Blow Counts	Rec.	SAMPLE LITHOLOGY	COMMENTS	COMPLETION DETAILS
0¬							
	0-2'	0.0	NA	100%	sand, fine to coarse gravel, trace to little silt, trace debris, no white material, dry	No sample for lab analysis	NA
5_	2-4'	NR	NA	100%	Clay, brown, trace gravel, hard, dry to moist		

Location: **General Comments:** Northing/Latitude: NA ID = Inner Diameter Easting/Longitude: NA HSA = Hollow Stem Auger Horizontal Datum: NA NA = Not Applicable / Not Recorded

Vertical Datum:

Apparent Water Level Lab Sample Location

Symbol Key:





Page 1 of 1

PROJECT: NYSDEC Niagara Highway Garage ADDRESS: 7105 Lockport Road, Niagara Falls, NY

WATER DEPTH: NA BOREHOLE DIAM .: 2"

SURFACE ELEV .: NA

TOTAL DEPTH: 10' CASING ELEV .: NA

JOB NO.: 0901588 Logged By:

Depth | Sample

Eric Popken

Drilling Method: Geoprobe (sampling) Sampling Method: Macro Core

WELL DIAM.:

9/23/14 Dates Drilled:

Drilling Company: TREC Environmental Inc.

Soil Class. System: Burmister

Drill Rig Type: Geoprobe 6620 DT

Field Screening: MiniRAE 2000 PID w/10.6 eV Lamp

Depth (feet)	Sample Interval	Field Screen	Blow Counts	Rec.	SAMPLE LITHOLOGY	COMMENTS	COMPLETION D	ETAILS
0	•	•						
0	0-6"	NR	NA	NR	Gravel	No sample for lab analysis		
	6"-4'	0.0	NA	NR	Clay, brown, hard, dry		NA	
-	4-6'	0.0	NA	NR				
5-		0.0			Clay, brown, hard, dry			
	6-8'	0.0	NA	NR	Till			
10 -	8-10'	NR	NA	NR	Till			
10 -						Refusal at 10 feet bgs		

Northing/Latitude: NA Easting/Longitude: NA Horizontal Datum: NA Vertical Datum:

Location:

**General Comments:** ID = Inner Diameter HSA = Hollow Stem Auger NA = Not Applicable / Not Recorded Symbol Key: Apparent Water Level Lab Sample Location

 $\mathbb{X}$ 

SB-124 p. 1 of 1



Page 1 of 1

PROJECT: NYSDEC Niagara Highway Garage ADDRESS: 7105 Lockport Road, Niagara Falls, NY

Geoprobe 6620 DT

WATER DEPTH: NA BOREHOLE DIAM .: 2"

SURFACE ELEV .: NA

TOTAL DEPTH: 4' CASING ELEV .: NA

JOB NO.: 0901588

Eric Popken

Drilling Method: Geoprobe (sampling)

WELL DIAM.:

Logged By: Dates Drilled:

9/23/14 Sampling Method:

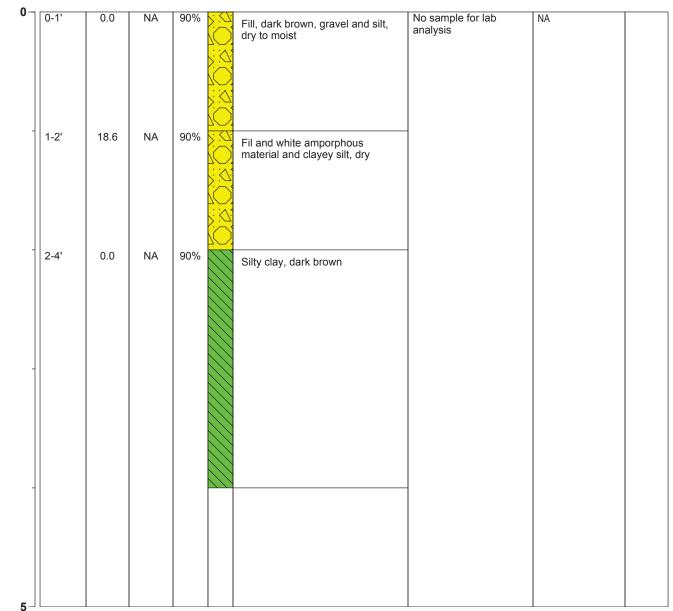
Macro Core

Drilling Company: TREC Environmental Inc. Drill Rig Type:

Soil Class. System: Burmister

Field Screening: MiniRAE 2000 PID w/10.6 eV Lamp

Dept (feet		Field Screen	Blow Counts	Rec.	SAMPLE LITHOLOGY	COMMENTS	COMPLETION [	DETAILS	
0	0-1'	0.0	NA	90%	Fill, dark brown, gravel and silt,	No sample for lab	NA		



Location: **General Comments:** ID = Inner Diameter Northing/Latitude: NA Easting/Longitude: NA HSA = Hollow Stem Auger Horizontal Datum: NA NA = Not Applicable / Not Recorded

Vertical Datum:

Symbol Key: Apparent Water Level Lab Sample Location

 $\mathbb{X}$ 

SB-125

Page 1 of 1

PROJECT: NYSDEC Niagara Highway Garage ADDRESS: 7105 Lockport Road, Niagara Falls, NY

WATER DEPTH: NA

TOTAL DEPTH: 4' CASING ELEV .: NA

JOB NO.: 0901588

BOREHOLE DIAM .: 2"

SURFACE ELEV .: NA

Logged By: Eric Popken Drilling Method:

WELL DIAM.:

9/23/14 Dates Drilled:

Sampling Method:

Geoprobe (sampling)

Macro Core

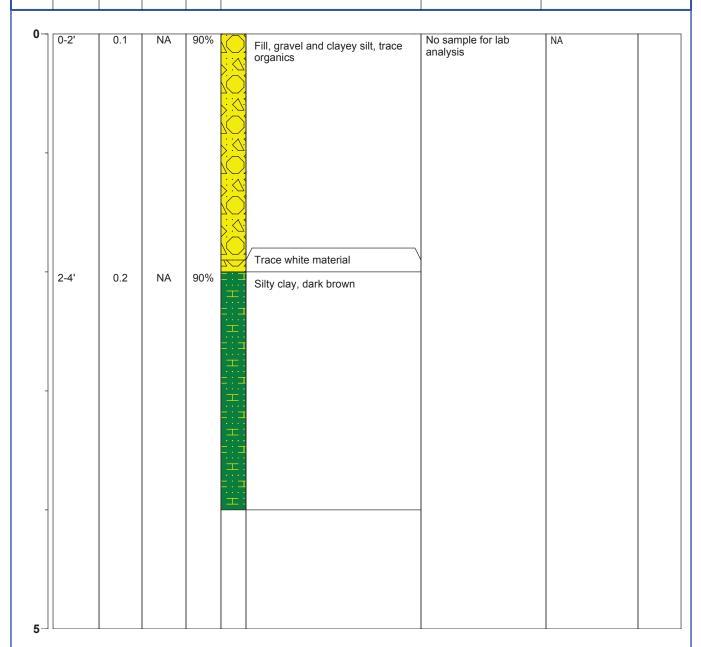
Drilling Company: TREC Environmental Inc.

Soil Class. System: Burmister

Drill Rig Type: Geoprobe 6620 DT Field Screening:

MiniRAE 2000 PID w/10.6 eV Lamp

Depth	Sample	Field	Blow				
(feet)	Interval	Screen	Counts	Rec.	SAMPLE LITHOLOGY	COMMENTS	COMPLETION DETAILS



**General Comments:** Location: Northing/Latitude: NA ID = Inner Diameter Easting/Longitude: NA HSA = Hollow Stem Auger Horizontal Datum: NA NA = Not Applicable / Not Recorded Vertical Datum:

Symbol Key: Apparent Water Level Lab Sample Location

 $\mathbb{X}$ 

SB-126 p. 1 of 1



Page 1 of 1

PROJECT: NYSDEC Niagara Highway Garage ADDRESS: 7105 Lockport Road, Niagara Falls, NY

JOB NO.: 0901588

SURFACE ELEV .: NA WATER DEPTH: NA BOREHOLE DIAM .: 2" TOTAL DEPTH: 8' CASING ELEV .: NA WELL DIAM.:

Logged By: Eric Popken Drilling Method: Geoprobe (sampling)

9/23/14 Dates Drilled: Sampling Method: Macro Core Drilling Company: TREC Environmental Inc. Soil Class. System: Burmister

Drill Rig Type: Geoprobe 6620 DT Field Screening: MiniRAE 2000 PID w/10.6 eV Lamp

Depth (feet)	Sample Interval	Field Screen	Blow Counts	Rec.	SAMPLE LITHOLOGY	COMMENTS	COMPLETION DETAILS
0-	0-1'	NR	NA	100%	Gravel and fill		NA NA
-	1-3'	9.9	NA	100%	Fill with white amorphous material	SB-127 (1-3') sampled for lab analysis	593
-	3-4'	NR	NA	100%	Clay, dark brown		
-	4-6'	0.4	NA	100%	Clay, dark brown		
5-							
-	6-8'	0.4	NA	100%	Till		

Northing/Latitude: NA Easting/Longitude: NA Horizontal Datum: NA Vertical Datum:

Location:

**General Comments:** ID = Inner Diameter

HSA = Hollow Stem Auger NA = Not Applicable / Not Recorded Symbol Key: Apparent Water Level Lab Sample Location



SB-127 p. 1 of 1

Page 1 of 1

PROJECT: NYSDEC Niagara Highway Garage ADDRESS: 7105 Lockport Road, Niagara Falls, NY

WATER DEPTH: NA BOREHOLE DIAM .: 2"

SURFACE ELEV .: NA

TOTAL DEPTH: 4' CASING ELEV .: NA

JOB NO.: 0901588

Eric Popken

Drilling Method:

Logged By: 9/23/14 Dates Drilled:

Sampling Method:

WELL DIAM.:

Macro Core

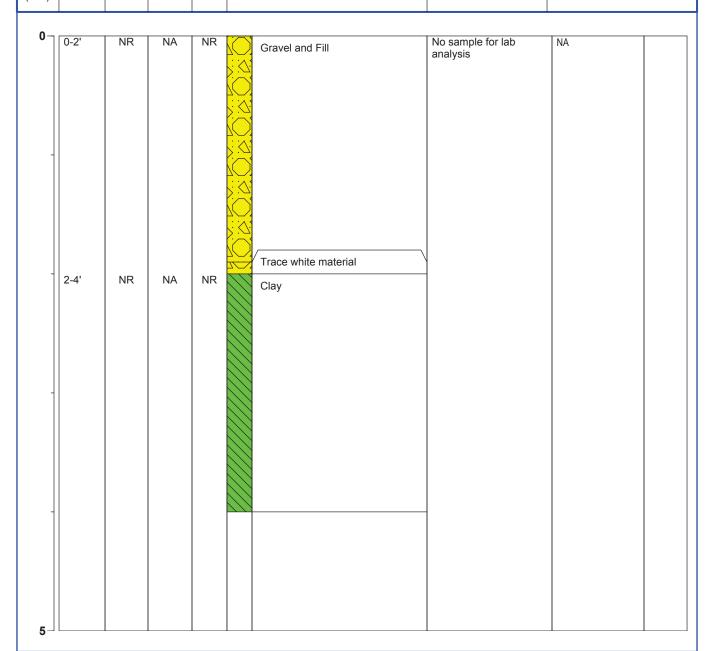
Geoprobe (sampling)

Drilling Company: TREC Environmental Inc.

Soil Class. System: Burmister

Drill Rig Type: Geoprobe 6620 DT Field Screening: MiniRAE 2000 PID w/10.6 eV Lamp

Depth Sample Field Blow Rec. SAMPLE LITHOLOGY **COMMENTS COMPLETION DETAILS** (feet) Interval Screen Counts



Location: Northing/Latitude: NA Easting/Longitude: NA Horizontal Datum: NA

Vertical Datum:

**General Comments:** ID = Inner Diameter HSA = Hollow Stem Auger NA = Not Applicable / Not Recorded

Symbol Key: Apparent Water Level Lab Sample Location

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SB-128 p. 1 of 1



Page 1 of 1

PROJECT: NYSDEC Niagara Highway Garage SURFACE ELEV .: NA ADDRESS: 7105 Lockport Road, Niagara Falls, NY

WATER DEPTH: NA BOREHOLE DIAM .: 2" TOTAL DEPTH: 4' CASING ELEV .: NA

JOB NO.: 0901588 Logged By:

Eric Popken

Drilling Method:

WELL DIAM.:

9/23/14 Dates Drilled:

Sampling Method:

Drilling Company: TREC Environmental Inc.

Macro Core Soil Class. System: Burmister

Drill Rig Type: Geoprobe 6620 DT

Field Screening: MiniRAE 2000 PID w/10.6 eV Lamp

Geoprobe (sampling)

Depth Sample Field Blow Rec. SAMPLE LITHOLOGY **COMMENTS COMPLETION DETAILS** (feet) Interval Screen Counts 0 0-2' NR NA No sample for lab NA Gravel and Fill analysis Trace white material 2-4' NR NA NR Clay

Northing/Latitude: NA Easting/Longitude: NA Horizontal Datum: NA Vertical Datum:

Location:

**General Comments:** ID = Inner Diameter HSA = Hollow Stem Auger NA = Not Applicable / Not Recorded

Symbol Key: Apparent Water Level Lab Sample Location

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SB-129 p. 1 of 1



Page 1 of 1

PROJECT: NYSDEC Niagara Highway Garage SURFACE ELEV .: NA ADDRESS: 7105 Lockport Road, Niagara Falls, NY

WATER DEPTH: NA BOREHOLE DIAM .: 2" TOTAL DEPTH: 4' CASING ELEV .: NA

JOB NO.: 0901588

Logged By:

Eric Popken

Drilling Method: Geoprobe (sampling)

WELL DIAM.:

Dates Drilled:

9/23/14

Sampling Method:

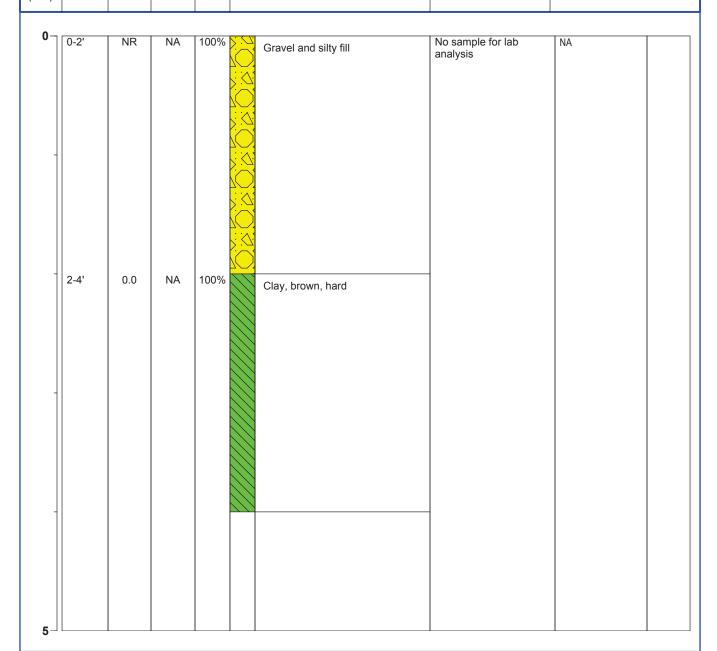
Macro Core Soil Class. System: Burmister

Drill Rig Type:

Drilling Company: TREC Environmental Inc. Geoprobe 6620 DT

Field Screening: MiniRAE 2000 PID w/10.6 eV Lamp

Depth Sample Field Blow Rec. SAMPLE LITHOLOGY **COMMENTS COMPLETION DETAILS** (feet) Interval Screen Counts



Location: Northing/Latitude: NA Easting/Longitude: NA Horizontal Datum: NA

Vertical Datum:

**General Comments:** ID = Inner Diameter HSA = Hollow Stem Auger NA = Not Applicable / Not Recorded

Symbol Key: Apparent Water Level Lab Sample Location

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SB-130



Page 1 of 1

PROJECT: NYSDEC Niagara Highway Garage ADDRESS: 7105 Lockport Road, Niagara Falls, NY

TOTAL DEPTH: 4'

JOB NO.: 0901588

WATER DEPTH: NA BOREHOLE DIAM .: 2"

SURFACE ELEV .: NA

CASING ELEV .: NA

Logged By:

Eric Popken

Drilling Method:

WELL DIAM.:

9/23/14 Dates Drilled:

Sampling Method:

Macro Core

Drill Rig Type:

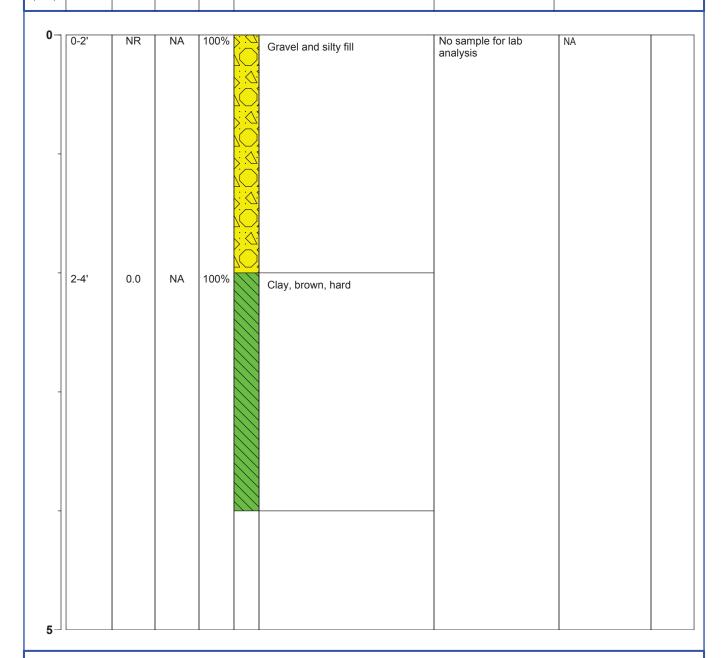
Drilling Company: TREC Environmental Inc. Geoprobe 6620 DT

Soil Class. System: Burmister

Field Screening: MiniRAE 2000 PID w/10.6 eV Lamp

Geoprobe (sampling)

Depth Sample Field Blow Rec. SAMPLE LITHOLOGY **COMMENTS COMPLETION DETAILS** (feet) Interval Screen Counts



Location: Northing/Latitude: NA Easting/Longitude: NA Horizontal Datum: NA

Vertical Datum:

**General Comments:** ID = Inner Diameter

HSA = Hollow Stem Auger NA = Not Applicable / Not Recorded

Symbol Key: Apparent Water Level Lab Sample Location

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JOB NO.: 0901588

ID NO.: **SB-132** 

Page 1 of 1

PROJECT: NYSDEC Niagara Highway Garage SURFACE ELEV.: NA ADDRESS: 7105 Lockport Road, Niagara Falls, NY WATER DEPTH: NA

SURFACE ELEV.: NA TOTAL DEPTH: 4'
WATER DEPTH: NA CASING ELEV.: NA
BOREHOLE DIAM.: 2"
WELL DIAM.: NA

Logged By: Eric Popken Drilling Method: Geoprobe (sampling)

Dates Drilled: 9/23/14 Sampling Method: Macro Core
Drilling Company: TREC Environmental Inc. Soil Class. System: Burmister

Drill Rig Type: Geoprobe 6620 DT Field Screening: MiniRAE 2000 PID w/10.6 eV Lamp

Depth (feet)	Sample Interval	Field Screen	Blow Counts	Rec.	SAMPLE LITHOLOGY	COMMENTS	COMPLETION DETAILS
0-	0-2'	NR	NA	100%	Gravel and silty fill	No sample for lab analysis	NA
-	2-4'	0.0	NA	100%	Clay brown hard		
		0.0		1667,6	Clay, brown, hard		
5_							

Apparent Water Level
Lab Sample Location

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Vertical Datum: NA

SB-132

Symbol Key:

p. 1 of 1



Page 1 of 1

PROJECT: NYSDEC Niagara Highway Garage

ADDRESS: 7105 Lockport Road, Niagara Falls, NY

JOB NO.: 0901588

SURFACE ELEV.: NA
WATER DEPTH: NA
BOREHOLE DIAM.: 2'

SURFACE ELEV.: NA TOTAL DEPTH: 4'
WATER DEPTH: NA CASING ELEV.: NA
BOREHOLE DIAM.: 2"
WELL DIAM.: NA

Logged By: Eric Popken Drilling Method: Geoprobe (sampling)

Dates Drilled: 9/23/14 Sampling Method: Macro Core
Drilling Company: TREC Environmental Inc. Soil Class. System: Burmister

Drill Rig Type: Geoprobe 6620 DT Field Screening: MiniRAE 2000 PID w/10.6 eV Lamp

Depth (feet)	Sample Interval	Field Screen	Blow Counts	Rec.	SAMPLE LITHOLOGY	COMMENTS	COMPLETION DETAILS
0-	0-2'	NR	NA	100%	Gravel and silty fill	No sample for lab analysis	NA
-	2-4'	0.0	NA	100%	Clay brown hard		
		0.0		1667,6	Clay, brown, hard		
5_							

 Location:
 General Comments:

 Northing/Latitude:
 NA
 ID = Inner Diameter

 Easting/Longitude:
 NA
 HSA = Hollow Stem Auger

 Horizontal Datum:
 NA
 NA = Not Applicable / Not Recorded

 Vertical Datum:
 NA

Symbol Key: Apparent Water Level Lab Sample Location

SB-133 p. 1 of 1

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Page 1 of 1

PROJECT: NYSDEC Niagara Highway Garage ADDRESS: 7105 Lockport Road, Niagara Falls, NY

WATER DEPTH: NA BOREHOLE DIAM.: 2"

SURFACE ELEV .: NA

TOTAL DEPTH: 4' CASING ELEV .: NA

JOB NO.: 0901588

Eric Popken

Drilling Method: Geoprobe (sampling)

WELL DIAM.:

Logged By: 9/23/14 Dates Drilled:

Sampling Method:

Drilling Company: TREC Environmental Inc.

Macro Core Soil Class. System: Burmister

Drill Rig Type:

Geoprobe 6620 DT

Field Screening: MiniRAE 2000 PID w/10.6 eV Lamp

Depth (feet)	Sample Interval	Field Screen	Blow Counts	Rec.	SAMPLE LITHOLOGY	COMMENTS	COMPLETION DETAILS
0	0-6"	NR	NA	100%	Asphalt	No sample for lab analysis	NA
						analysis	
	6"-2'	NR	NA	100%	Gravel and silty fill		
_							
	2-4'	0.0	NA	100%	Clay, brown, hard		
-							

Location: Northing/Latitude: NA Easting/Longitude: NA Horizontal Datum: NA Vertical Datum:

**General Comments:** ID = Inner Diameter HSA = Hollow Stem Auger NA = Not Applicable / Not Recorded Symbol Key: Apparent Water Level Lab Sample Location

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SB-134 p. 1 of 1



Page 1 of 1

PROJECT: NYSDEC Niagara Highway Garage ADDRESS: 7105 Lockport Road, Niagara Falls, NY

JOB NO.: 0901588

SURFACE ELEV.: NA WATER DEPTH: NA BOREHOLE DIAM.: 2"

TOTAL DEPTH: 4'
CASING ELEV.: NA
WELL DIAM.: NA

Logged By: Eric Popken Drilling Method: Geoprobe (sampling)

Dates Drilled: 9/23/14 Sampling Method: Macro Core
Drilling Company: TREC Environmental Inc. Soil Class. System: Burmister

Drill Rig Type: Geoprobe 6620 DT Field Screening: MiniRAE 2000 PID w/10.6 eV Lamp

Depth (feet)	Sample Interval	Field Screen	Blow Counts	Rec.	SAMPLE LITHOLOGY	COMMENTS	COMPLETION DETAILS
0-	0-6"	NR	NA	100%	Asphalt	No sample for lab analysis	NA
-	6"-2'	NR	NA	100%	Gravel and silty fill		
5_	2-4'	0.0	NA	100%	Clay, brown, hard		

 Location:
 General Comments:

 Northing/Latitude:
 NA
 ID = Inner Diameter

 Easting/Longitude:
 NA
 HSA = Hollow Stem Auger

 Horizontal Datum:
 NA
 NA = Not Applicable / Not Recorded

 Vertical Datum:
 NA

Symbol Key:
Apparent Water Level
Lab Sample Location

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SB-135 p. 1 of 1